

SCHEMAS OF UNCERTAINTY

Schemas of Uncertainty: Soothsayers and Soft AI started as a cross-departmental research group at the Sandberg Instituut, Gerrit Rietveld Academie in the winter of 2018. The research group was concerned with the notion of prediction, both as a long-standing interest of human beings through their histories, but also with the ways prediction is inscribed into the techno-capitalist present. It investigated the risks and possibilities emerging technologies pose to the imagination of other possible futures or realities. From divination to machine learning, 'Schemas of Uncertainty' attempted to sketch the relation between prediction and prescription through a collective research practice.

Following a series of workshops, participants of the research group, as well as invited guests, contributed towards a

symposium and this publication. This book is an attempt to translate some of the conversations that took place throughout the research group as well as to take the discussion further by asking its participants and guest contributors to respond to its themes.

The participants of the 'Schemas of Uncertainty' research group were: Gamze Baray, Holly Childs, Marijn Dagenaar, Eurico Sa Fernandes, Levi van Gelder, Tom Kemp, Kyu Lim Kim, Bin Koh, Sascha Krischock, Juliette Lizotte, Alice Dos Reis, Charlotte Rohde, Ben Tupper, Alex Walker and Karina Zavidova.

The initiative was organised and facilitated by Danae Io and Callum Copley with the support of the Sandberg Instituut.

7.
SCHEMAS OF UNCERTAINTY,
A PROPOSITION
DANAE IO AND CALLUM COPLEY
19.
ALGORITHMS AS CARTOMANCY
FLAVIA DZODAN
47.
LOST THE KEY, THE SECRET
HOLLY CHILDS
57.
WHAT IF TECHNOLOGY WERE A PRAYER?
INTERVIEW WITH KENRIC MCDOWELL
DANAE IO
71.
AI: WARPED, COLORFUL FORMS
AND THEIR UNCLEAR GEOMETRIES
RAMON AMARO
93.
PROFIT AND PROPHECY
CALLUM COPLEY
113.
WITCHES IN SPACE: TRUE JOURNEY IS RETURN
JULIETTE LIZOTTE

139.
THOTH TAROT ILLUSTRATIONS
BIN KOH
143.
PAUL, THE OCTAPUS' DEATH AND OTHER
THOUGHTS ON ANIMAL ORACLES
ALICE DOS REIS
151.
THE FUTURE—ORACULAR: PREDICTION,
DIVINATION AND THE POLITICS OF CERTAINTY
EMILY ROSAMUND
169.
DUNGEONEERING
TOM KEMP
213.
FATE WORK, A CONVERSATION
VALENTINA DESIDERI
AND STEFANO HARNEY
247.
LIGHTWORKERS: MYTHS ARE ALTERNATIONS,
THEY ARE RECORDS OF MUTATIONS
IONNA GERAKIDI

SCHEMAS OF UNCERTAINTY,
A PROPOSITION
DANAE IO AND CALLUM COPLEY

I am not proposing a return to the Stone Age. My intent is not reactionary, nor even conservative, but simply subversive. It seems that the utopian imagination is trapped, like capitalism and industrialism and the human population, in a one-way future consisting only of growth. All I'm trying to do is figure out how to put a pig on the tracks.¹

—Ursula K. Le Guin

Schemas of uncertainty as a proposition suggests a space of indeterminacy; a set of possible frameworks that allow the unintelligible to flow through them. Perhaps an introduction is all too fixing—enacting a form of pre-emption of what is to come. Therefore, as a reader, you can treat this text as an invitation to move with us through some of the many possible links the contributions generate when read in relation to one another.

Under the current socio-political structures, *uncertainty* is managed by agents to fix the future into 'stable' yet merely approximate trajectories—ones which might be predicted, secured and monetised. Through complex, technological means, uncertainty is subsumed under the paradigm of 'prediction'. Concurrently, uncertainty also becomes the very product of a neoliberal capitalist system which simultaneously creates the desire for certainty, while increasing the material and social precarity for the

neoliberal subject who is ever more responsible for their own fate. With this project, we aim to think with uncertainty as the blurred space of indeterminacy, a productive space of mobility that holds potential; a means of resisting visions of total legibility that are suggested in Silicon Valley's visions of the future. In such visions, one's subjectivity can be rendered legible into a data metric, allowing ubiquitous computing to power a 'frictionless' life under capitalism. How can staying with uncertainty become a means of resisting representation, and what would such an evasion mean in a political system that requires representation to function?

Through a collection of contributions that vary in format and mode of address, the book explores the relation between prediction and prescription. It traces the effects of predictive technologies on the imagination of possible futures, aside from the future of technological progress. The future, as a singular noun, is rather daunting. If it is seen as the space lying ahead within a spatiotemporal continuum it becomes a place to get to, a space to colonise, to invade and exploit. In that metaphor, the past is occupying the space behind the present, and therefore when looking ahead to the future, the past becomes easy to forget. Such a metaphor allows for a Western view of the future as a blank space to project onto, removed from its colonial and patriarchal histories. Science fiction writer Ursula K. Le Guin, in *Science Fiction and The Future*, proposes to think with the Quechua-speaking peoples of the Andes

1. K. Le Guin, Ursula. *Dancing at the Edge of the World: Thoughts on Words, Women, Places*. New York: Grove Press, 2006, 85.

that consider the past as laying in front of you, since it is what you are aware of. She writes, “The future lies behind—behind your back, over your shoulder. The future is what you can’t see, unless you turn around and kind of snatch a glimpse.”² In addressing the role of predictive methods in imagining the future, through multiple epistemological frameworks, we aim to treat the future as unknown, yet not removed from ancestral lineages. Moving between machine learning, critical theory, tarot readings, astrology, personal narratives, myths, fiction and much else, the book makes space for porous readings. Through various accounts on predictive practices, it opens up alternate propositions for other possible futures.

Be it in reading coffee, tarot, sheep livers, turtle shells, the flight patterns of birds, or even using machine learning capabilities, *prediction* has been a long-standing interest for human beings, often involving non-human actors in the process. However, agency and intention for the reader, the one being read as well as all actors involved, vary at each of these instances. Within current technological predictive systems, the receiver of a prediction is not afforded the opportunity for their own interpretation; leaving them in a position of little if any agency. Conversely, through older divination practices interpretation can be performed both by the reader and the person being read; the divination method becoming a sys-

tem in place to structure that interaction. Agency, in these cases, is distributed along all things and people partaking the divination, rather than concentrated in a single entity. Such acts perhaps can be seen as gestures towards reaching more-than-human knowledges.

What are the roles of algorithms both in generating multiple fates but also as a bounding force to a singular fate led by technological progress? In her essay ‘Algorithms as Cartomancy’, Flavia Dzodan challenges the distinction between modern science and ancient forms of esoterica by highlighting their shared and inseparable past. Flavia complicates the history of Enlightenment thinking by pointing to the interest in, and use of, divination practices by some of its key figures. Likewise, she exposes the pseudo-scientific underpinnings of algorithmic governance pointing to contemporary taxonomies and racist databases. In doing so, the hypocrisy of contemporary technological thinking is brought to the fore, one that dismisses non-western epistemological methods, whilst relying on the very same histories. Flavia’s analysis not only investigates how these different methods of knowledge have been co-existing but also how scientific epistemologies render other knowledges illegitimate, especially when such knowledges accept unknowability as a potential.

Such unknowability is what Eric Smidt, the former CEO of Google, is trying to alleviate by stating in 2006: “The goal is to enable Google users to be able to ask questions such as ‘What shall I do

2. K. Le Guin, Ursula. *Dancing at the Edge of the World: Thoughts on Words, Women, Places*. New York: Grove Press, 2006, 142.

tomorrow?’ and ‘What job shall I take?’” This quote forms the point of departure for Emily Rosamond’s investigation of what she describes as the *future-oracular mode of address* which describes a relationship between the seeking-subject and predictive platforms. In her essay, Rosamond explores the dual histories of companies like Google which draw not only on a tradition of prediction but also on one of divination. She posits similarities between the organization of informational power possessed by the Oracle in ancient Delphi and tech giants at present, while addressing the ‘colonization of divination’ at play as calculation and divination intermingle under neoliberal ideology.

Could the status of refusing anticipation be a productive way of stepping aside from the position of the seeking subject? Through a fictionalized conversation with a friend, Holly Childs discusses the nature of anticipation, or more accurately, the nature of not doing so. The prose wanders through shopping malls and furniture stores, asking what desire might mean when one does not anticipate. In the text, the possibility of not anticipating is thickened. In a society that is ruled by calculation and strategy is it possible to not anticipate the future?

The problem with calculation is that it is just an effect of our assumption of separability, that is, we see ourselves as separate (and superior) to everything else in the world. Because of that, we also presume that it is our task to determine, and control, every-

*thing else. So, calculation – which is about being able to control (through prediction of what will happen in the future) – becomes necessary. So I think we have to be aware of the separability. Cause if the ontological condition taken for granted is separability then calculation is natural, isn’t it? If we are not aware of that pre-conditioning then we end up identifying with the work we do, and then trying to instrumentalize something. And instrumentalization still begins with and reinforces the subject. You see?*³

—Denise Ferreira Da Silva

When thinking about the future, our research for this project led us repeatedly back to fictionality. Ever out of reach, the future is necessarily always an imagined one, making a speculative future somewhat of a tautology. It is this fictionality which Callum Copley addresses in his text ‘Profit and Prophecy’, exploring the relationship between futurity and an increasingly financialized global economy. He focuses on the commodification of risk as means to generate a profit in the now, and the ways in which this action might be foreclosing the possibility of any truly livable future. By keeping fictionality close when exploring such varied themes as tarot and machine learning, we were ever aware of the role of interpretation in all forms of prediction. Fictionality is at play both in the interpersonal reading, as an opportunity for meaning-making, and in the interpretation of approxima-

3. Da Silva, D.F. and Desideri V., *A conversation between Valentina Desideri and Denise Ferreira da Silva*, 2016, 15.

tions of data for algorithmic governance. In interviewing Kenric McDowell, the co-leader of *Artist + Machine Intelligence* at Google, Danae Io addresses the different roles interpretation plays in divination and machine learning. In their exchange, they speak about the multidimensionality of neural nets as an alternate thinking schema, but also about predictive algorithms as enactors of the plausible instead of the possible. Kenric suggests that the high-dimensional space of neural nets might be a method of thinking that enables multiplicity to enter. But here we would like to ask, what is the difference between multiplicity and indeterminacy?

Sociologist Adrian Mckenzie, in a paper addressing the relation between machine learning and the generation of desire for predictability that, “While powerfully equipped to model variations, they [technologies such as machine learning] struggle to predict becomings, let alone change themselves.”⁴ Mackenzie writes, “the effectiveness of machine learning in any setting depends on relatively stable forms. Variation fuels data mining, but change thwarts it.”⁵ Following Mckenzie’s argument, it is important to think whether technologies whose foundation is based on determinacy can support becomings. It seems that technologies at present, although facilitate multiple categorizations of subjects, presume the stability of such categories or even

the possibility of subjects being rendered legible and classifiable under questionable taxonomic systems.

Classification reduces individuals to data, therefore making them visible to governance. Thinking with Fanon, Ramon Amaro writes: “surveillance is a mode of visibility, a technology through which colonialism distributes power as a suspicion of the Other.” Amaro traces how machine learning and AI enforce such modes of surveillance, highlighting their capacity to uphold colonial logics. In thinking how to disrupt such logics, Amaro proposes of the Black Technical Object as a way of relating with technology that generates new forms of being and becoming that evade representation—starting with the re-imagining the self. Blackness challenges the “state of homogeneity and the perceived stability of categories to instead engage in a transformative politics of affirmative self belonging,” he writes.

What we need is a robustly nuanced reasonableness, one that can operate in an atmosphere of uncertainty, that gives us the courage to forge on, to launch our hopes into the unknown—the future—by engaging positively with otherness and unintelligibility.”⁶

—Joan Retallack

How can we get to that nuanced reasonableness that allows us to live with the complexity of the world without drowning in it? Or further, how might uncertainty become something to live with, as well

4. Mackenzie, Adrian. *The production of prediction: What does machine learning want?*, European Journal of Cultural Studies, Vol 18, Issue 4-5, p.444, First Published June 16, 2015. [www.doi.org/10.1177/1367549415577384](https://doi.org/10.1177/1367549415577384)

5. Ibid.

6. Retallack, Joan. *Poetical Wager*. Berkeley: University of California Press, 2014, 22.

as being deployed as a means of resistance? In practices of divination, agency and co-determination is distributed among human and non-human participants, allowing uncertainty to flow in the process. However, often non-human participants are taking place in a divination for human ends. Alice Dos Reis' contribution further asks us to think through what it might mean to not only instrumentalise non-human animals for human ends within predictive practices, but rather look at prediction as a space of possible collaboration towards mutually constitutive futures. In Juliette's multi-path story, we are offered a variety of possible narratives that link the reader to witchcraft taking place in the year 2038, a time when the Earth has become a hostile environment to exist in. By choosing their path, the reader moves through a field of possible outcomes and ways of linking to Earth, technology, community, magic, ecofeminism and interplanetary travel. In these narratives, synergies between human and non-human entities are composed, suggesting of living with otherness.

Ioanna Gerakidi is proposing the framework of myths to engage with otherness in a complexified present. By drawing on personal narratives, poems and others texts, she thinks through myth as a schema to undemonise the unintelligible. "Myths are metaphors; they are movements towards reaching the unknown, touching otherness, espousing ambiguities," she writes. Thinking with myths and divination practices might be a way of 'putting a pig on the tracks' of trajectories that point towards

a future constituting only of growth. They might become means of staying with the unknown in the present and therefore sidetracking the fate of technological progress.

*The fate of the earth. The fate of me. The fate of you.*⁷
—Anne Carson

Although in its singularity—Fate—seems rather a narrow term, when thought of in its multiplicity—Fates—can become a means of imagining various possible futures.

Fates in their plurality might become an axis with which to think through our relation to the future in a present where the future is commonly seen as a path which each individual must strategise towards to realise. In their conversation, Valentina Desideri and Stefano Harney build on the meaning and practice of what they term 'Fate Work'. They regard reading practices as a way of resisting the capitalist imperative to strategise towards a singular future. Instead, they propose reading practices as methods of navigating the complexity of the present by collectively generating multiple narratives of the future while actively shaping the present. As they write, "developing a practice that proliferates fates, generates futures, can perhaps cause the future to lose its authority, which is to say to lose its abstraction, to come into the present as sensation, as something susceptible to the senses

7. Carson, Anne. 'Fate, Federal Court, Moon.' *London Review of Books* 39 no. 6 (2017): 30, www.lrb.co.uk/v39/n06/anne-carson/fate-federal-court-moon.

and something that in turn works on those senses in the present.”

For Harney and Desideri, reading practices can be readings of the stars, palms, tea leaves, or texts; they are practices of co-determination that involve at least two people. Tom Kemp while tracing a para-history of *Dungeons & Dragons* points to certain kinds of roleplaying games as opportunities to facilitate such productive indeterminacy. Reading practices can be a game of D&D or a research group; they are practices that sabotage a linear trajectory of the future led by capitalism. As Harney and Desideri write, they are ways “of unsettling each other, thus opening oneself up to co-determination while becoming more perceptive, since in order to sabotage, you need to be able to perceive the rhythms of the machines at work. You need to become a present reader, a reader of these abstract machines, and you throw a shoe in the middle of them. So that many fates can open up.”

With this book, we invite you to think through what it might mean to welcome uncertainty as a way of resisting ideas that impose a singular meaning or direction. Rather than something to be overcome, uncertainty might become a means of encompassing multiplicity. Subsequently, prediction ceases to be instrumentalized as a tool to prescribe the future but instead is undertaken as a gesture towards occupying an elsewhere and otherwise.

ALGORITHMS AS CARTOMANCY
FLAVIA DZODAN

This text was originally published as a lecture during the Schemas of Uncertainty Symposium on 18 April 2019.

When I said I wanted to discuss algorithms as a form of cartomancy I was, of course, being a bit provocative. One could argue that there is nothing more removed, more distant from the sterile, mathematical world of algorithmic calculations than the intuitive, rather unthinking world of tarot or card divination. And yet, one would be wrong.

It's the year 820 and Muhammad ibn Musa al-Khwarizmi finishes compiling the last tables of his *Zij al-Sindhind*, a treatise or 'system' to calculate celestial positions. al-Khwarizmi is an astrologer. But not just an astrologer. He is a mathematician, a geographer, a scholar. Born in the year 780 (or perhaps it would be more accurate to say "around the year 780" since the historical records show variations of a couple of years), al-Khwarizmi worked under the patronage of Caliph Al-Ma'mun of the Abbasid Caliphate. Around 820 AD he was appointed as the astronomer and head of the library of the House of Wisdom in Baghdad.¹

To understand the importance of astrology during this period, I'm going to quote an essay from Marika Sardar from the Department of Islamic Art at The Metropolitan Museum of Art in New York:²

1. 'Abu Ja'far Muhammad Ibn Musa Al-Khwarizmi,' MacTutor History of Mathematics Archive. Accessed May 01, 2019. <http://www-history.mcs.st-andrews.ac.uk/Biographies/Al-Khwarizmi.html>.
2. Sardar, Marika. "Astronomy and Astrology in the Medieval Islamic World." In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–. www.metmuseum.org/toah/hd/ast/ast_astr.htm (August 2011)

Astrology seeks to predict the influence of the heavenly bodies on events on earth, relying on understanding the movement of the planets and the ability to calculate their positions in the future. In this way, astrology was considered a branch of astronomy, and serious scientists all wrote astrological treatises. [...]

[A]strologers offered their services in bazaars, where anyone could pay for horoscope readings and predictions; and they were employed at royal courts, to help rulers decide such matters as when to announce an heir or launch a military campaign, or to predict the future state of their kingdoms. Horoscopes were also devised at the foundation of capital cities, such as Baghdad, capital of the Abbasids, and al-Mahdiyya, capital of the Fatimids, to foretell their futures.

The three tools of the astrologer were the astrolabe, used to determine the time by measuring the altitude of the sun or any visible stellar object, the ephemeris, a table that gives the positions of astronomical objects in the sky at a given time; and the dust board (takht), a tablet covered with sand on which calculations could be made and erased. Most astrologers learned their practice by studying with a master, acquiring a basic knowledge of astronomy and mathematics and the ability to use astronomical instruments.

After taking the measurements and making their calculations, the astrologist would then interpret the signs and what they meant for the patron's future.

(Incidentally, the planetary table I am showing here [see image on the right], from al-Khwarizmi's system is not the original because there is no surviving copy of this particular work in Arabic. We only have Latin copies made years after the fact when his work finally reached Spain and was translated into Latin, the language of science at the time).

Al-Khwarizmi contributions to mathematics, geography, astronomy, and cartography established the basis for innovation in algebra and trigonometry.³ His systematic approach to solving linear and quadratic equation led to algebra, a word derived from the title of his 830 book on the subject: *The Compendious Book on Calculation by Completion and Balancing*.

Historians believe that Caliph Al-Ma'mun sponsored Al-Khwarizmi science because he liked to have his horoscope read regularly. He consulted his own astrologer before making any political decisions. The word algebra was derived from the title of his book *Al Jabr wa al Muqabilah* ('The Compendious Book on Calculation by Completion and Balancing').

But it is his surname, Al-Khwarizmi, which was Latinized by Spanish scholars and evolved to our present day 'algorithm'.

The image shows a page from a manuscript, identified as Corpus Christi College MS 283, which is a Latin translation of al-Khwarizmi's Zij. The page contains several tables of astronomical data, including planetary positions and movements. The text is written in a medieval script, with some parts in red ink (rubrication). The tables are organized into columns with headings in Latin, and the data is presented in a structured, tabular format.

Page from Corpus Christi College MS 283. A Latin translation of al-Khwarizmi's Zij.

3. Mehri, Bahman. "From Al-Khwarizmi to Algorithm." *Olympiads In Informatics* 11, no. 2 (2017): 71-74. doi:10.15388/loi.2017.special.11.

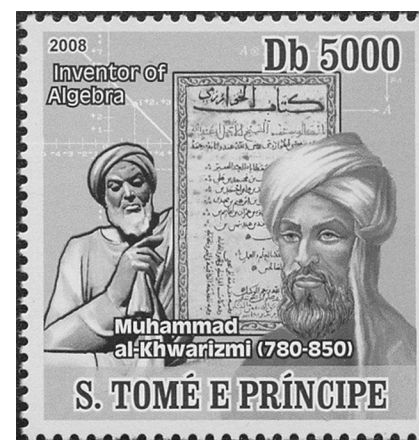
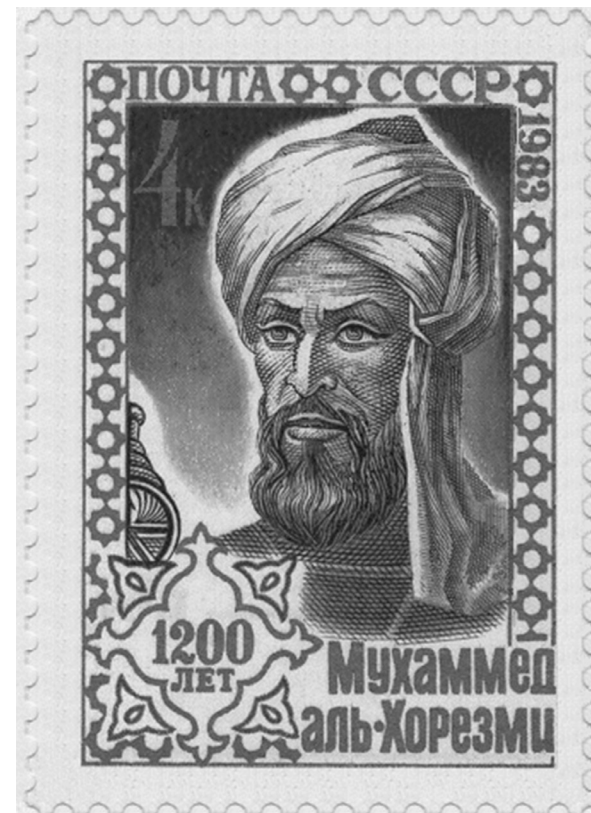
I'm going to quote briefly on this etymology from the Oxford English Dictionary:

*About 825, al-Khwarizmi wrote an Arabic language treatise on the Hindu–Arabic numeral system, which was translated into Latin during the 12th century under the title *Algoritmi de numero Indorum*. This title means “Algoritmi on the numbers of the Indians”, where “Algoritmi” was the translator’s Latinization of Al-Khwarizmi’s name. Al-Khwarizmi was the most widely read mathematician in Europe in the late Middle Ages, primarily through another of his books, the *Algebra*.^[16] In late medieval Latin, *algorismus*, English ‘algorism’, the corruption of his name, simply meant the “decimal number system”. In the 15th century, under the influence of the Greek word ἀριθμός ‘number’ (cf. ‘arithmetic’), the Latin word was altered to *algorithmus*, and the corresponding English term ‘algorithm’ is first attested in the 17th century; the modern sense was introduced in the 19th century⁴*

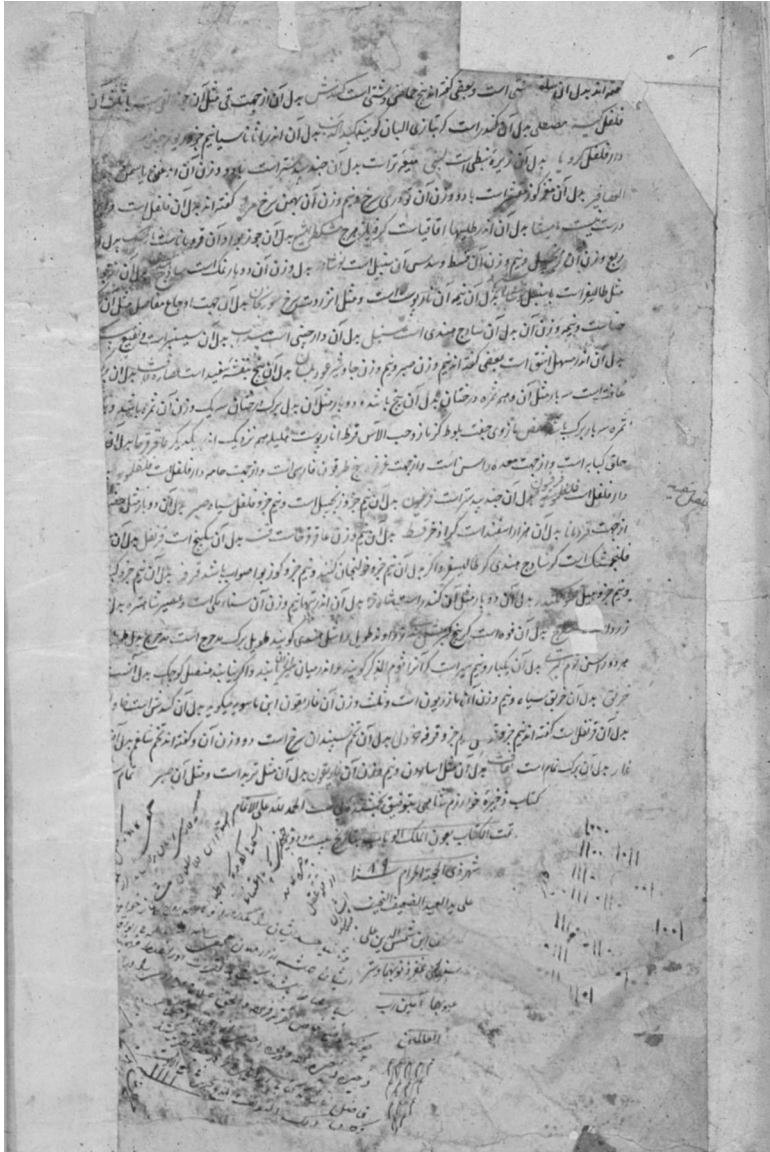
In English, the word algorithm was first used in the year 1230 and then later on it was used by Chaucer in 1391. The English language adopted the French term, but it wasn't until the late 19th century that ‘algorithm’ took on the meaning that it has in modern English.

There is also a 1240 poem, under the title *Carmen de Algorismo* composed by Alexandre de

4. *Oxford English Dictionary*, Third Edition, 2012.



Al-Kwarizmi postage stamps.



The colophon of a copy of *The Treasure of Khwarazm' Shah* by Jurjani.

Villedieu: "Algorism is the art by which at present we use those Indian figures, which number two times five."⁵ This poem is a few hundred lines long and summarizes the art of calculating with what were at the time a new style of Hindu numerals.

Now, the same academies that housed this transdisciplinary scholar who gave us algorithms and algebra also hosted scholars of Abjad science, the art of Arabic numerology which was used to predict the future, determine marriage compatibility and evaluate lyrical compositions by assigning a numerical value to each letter of the alphabet and using a system of additions and subtractions to obtain an index that would determine the outcome.

To complicate things even further in this fuzzy division between what constitutes science and what constitutes divination, around this time, it was common to practice an offshoot of astrology known as 'geomancy' which was based on reading patterns that can be compared to our contemporary understandings of sacred geometry. To illustrate this blurring of boundaries between what constitutes science and what constitutes divination, I managed to track a copy of this manuscript in the digital archives of the Islamic Medical Manuscripts collection of the US National Library of Medicine.⁶ This manuscript, *The Treasure of Khwarazm' Shah*, written in the year 1100 is one of the first medical encyclopedias. The work

5. "Algorithm." *The Programmers Book*. Accessed May 01, 2019. www.theprogrammersbook.com/algorithm/.

6. "Islamic Medical Manuscripts : Catalogue - Encyclopedias 11-13." U.S. National Library of Medicine. December 13, 2013. Accessed April 29, 2019. www.nlm.nih.gov/hmd/arabic/E11_E13.html.

is composed of ten volumes covering ten medical fields: anatomy, physiology, hygiene, diagnosis and prognosis, fevers, diseases particular to a part of the body, surgery, skin diseases, poisons and antidotes, and medicaments.

In the margins of this manuscript, if you look carefully, there are some scribblings and this is the exact quote with the description from the Library of Medicine:

The colophon of a copy of The Treasure of Khwarazm'shah by Jurjāni where it states that the copy was completed on 22 Dhu al-Hijjah 1089 [=17 August 1679] by a scribe named Muhammad Mu'min ibn Shams al-Din 'Ali (with the last part of the name, the nisbah, not legible. In the margin there is a geomantic tableau for use in divination by a method known in Arabic as "ilm al-raml" (the art of the sand) and in English as "geomancy".

But it wasn't only Arabic and Persian scholars interested in blurring the lines between science and the more esoteric or occult topics. Closer in time, European scientists were in their own quest. To quote professor Dan Edelstein in the essay *Dark Side of the Enlightenment*, published by the Stanford Humanities Centre:

When most people talk about the age of enlightenment they are usually referring to a period in 18th century European history when logic and reason rose

to supremacy. During this important period of cultural growth, public intellectuals like John Locke, Jean-Jacques Rousseau, and Voltaire dedicated themselves to solving perennial human dilemmas. They and their contemporaries gathered in salons and coffeehouses and exchanged volumes of letters in the name of sharing knowledge and improving the human condition.⁷

Professor Edelstein researches an aspect of the Enlightenment that is unfamiliar to most people, the so-called 'dark side' of the Enlightenment. In his research, he described the differentiating factors. "The prevailing understanding of the enlightenment is one in which there was only scientific and rational thinking, but there was also a significant number of people contributing to the enlightenment who were absorbed in dubious scholarly pursuits like alchemy, mythology, astrology and secret societies," he writes.⁸

Perhaps the most famous and transcendental of these 'Dark Enlightenment Scholars' is Isaac Newton. Newton, born in 1642 was an English mathematician, physicist, astronomer, theologian, and author (described in his own day as a 'natural philosopher') who is widely recognised as one of the most influential scientists of all time, and a key figure in the scientific revolution. His book *Philosophiæ Naturalis Principia Mathematica* ('Mathematical Principles of

7. Stanford. "Dark Side of the Enlightenment." Stanford Humanities. March 24, 2014. Accessed April 29, 2019.

www.shc.stanford.edu/news/research/dark-side-enlightenment.

8. Ibid.

Natural Philosophy'), first published in 1687, laid the foundations of classical mechanics. Newton also made seminal contributions to optics, and shares credit with Gottfried Wilhelm Leibniz for developing the infinitesimal calculus which is considered by mathematicians to be the foundational science behind algorithmic calculations. Newton is considered one of the founding fathers of Enlightenment and of modern science. He also wrote more than 3 million words on the occult, the supernatural, astrology and tarot.

For example, Newton extensively studied and wrote about the Temple of Solomon, dedicating an entire chapter of *The Chronology of Ancient Kingdoms Amended* to his observations of the temple.⁹ Newton's primary source of information was the description of the structure given within *1 Kings of the Hebrew Bible*, which he translated himself from Hebrew. As a Bible scholar, Newton was initially interested in the sacred geometry of Solomon's Temple, such as golden sections, conic sections, spirals, orthographic projection, and other harmonious constructions. And in that sense, how different were his pursuits from those of the 11th century scholars in Persia and across the Arab world, combining astrology and geomancy to cast predictions about the future?

Upon his death, his heirs were terrified that these writings would come to light and tarnish his reputation as a proper scientist so they hid those

9. Stanford. "Dark Side of the Enlightenment." Stanford Humanities. March 24, 2014. Accessed April 29, 2019. www.shc.stanford.edu/news/research/dark-side-enlightenment.

papers which only came back to light in the late 19th and early 20th centuries. It was John Maynard Keynes, an economist who worked on financial prediction analysis in the 1930s who bought Newton's papers on esoterica and the occult and created an archive of them.

Grace Bobson, the woman who created the largest archive of Isaac Newton objects in the US was married to a man who was dead set on proving the evils of gravity. To prove these 'evils' he gave a Prize every year which Stephen Hawking won 3 times.¹⁰

The day before writing this lecture, I was commenting on my research on social media and I jokingly said that I feel that this paragraph contains a novel already. It is taken from an interview with author Sarah Dry whose research and scholarship compiled the occult writings of Newton in her book *The Newton Papers*. She says:

There's also Grace Babson, who created the largest collection of Newton objects and papers in America. She was married to a man who got rich predicting the crash of 1929. And Roger Babson [her husband] based his market research on Newtonian principles, using the idea that for every action there is an equal and opposite reaction. The market goes up so it must come down. Interestingly, he thought of gravity as an evil scourge. He had some relatives that drowned, and he thought that it was because grav-

10. Mann, Adam. "The Strange, Secret History of Isaac Newton's Papers." Wired. June 03, 2017. Accessed April 29, 2019. www.wired.com/2014/05/newton-papers-q-and-a

*ity pulled them down. So he started the Gravity Research Foundation, which went on to do research into anti-gravity technology. It was completely wacky, but it still exists today. An interesting note, though, is that it funds an essay prize, and Stephen Hawking won that prize three times.*¹¹

And the reason I am particularly interested in this side of Newton is precisely because of how ‘rational’ people will go on about astrology or tarot being invalid forms of knowledge and ‘unscientific’ while the man who set the basis for our modern understanding of science used them extensively as part of his daily practice and production.

While at the same time, many of these people who decry astrology or the occult as ‘irrational’ rely on a pseudoscience such as scientific racism to validate the creation of racial profiling algorithms to predict crime or political outcomes. It’s the selective application of the label of ‘pseudoscience’ that interests me.

Newton was obviously a man with a vivid imagination and a creativity that transcended what we would today consider traditional science. He believed that god had created the universe as some kind of machine and as the drawings of the temple of Salomon attest, he was interested in the use of sacred geometry to prove his theory.¹² One could perhaps say that he was one of the first to think of our reality as computer generated. Newton was what at the time

11. Ibid.

12. Newton, Isaac. *Observations upon the Prophecies of Daniel, and the Apocalypse of St. John: In Two Parts*. Charleston, SC: BiblioBazaar, 2007.

would have been considered a heretic. He had very strange and, dare I say, unorthodox views of religion and took to the Bible not with theological fervor but as a predictive technology, using stuff like the Book of Daniel to try to foretell the future.¹³

Also he left seeds of proto theories around ideas of infinite consciousness which are currently topics of exploration in physics and quantum theories, especially when he wrote “is not infinite space the sensory of a Being incorporeal, living, intelligent, omnipresent?”¹⁴ If these manuscripts had been published, Newton would have gotten into serious trouble for going against Church doctrine, not unlike Galileo a few centuries earlier.

Incidentally, he predicted the end of the world for 2060 and left behind a detailed explanation of these calculations.¹⁵ Scholars believe that these have informed the subsequent creation of scientific prediction models (dare I say, algorithms?). Newton may not have been referring to the apocalyptic 2060 event as a destructive act resulting in annihilation of the planet, but rather an event in which he believed the world, as he knew it, was to be replaced with a new one.

A few paragraphs ago I mentioned racial profiling. It wasn’t a throw-away remark or something in passing. I said, “many of these people who decry astrology or the occult as ‘irrational’ will rely on a pseudoscience such as scientific racism to validate

13. Ibid.

14. Sambrook, James. *Eighteenth Century: The Intellectual and Cultural Context of English Literature 1700-1789*. Place of Publication Not Identified: Routledge, 2016, 8.

15. Newton, Isaac. *Observations upon the Prophecies of Daniel, and the Apocalypse of St. John: In Two Parts*. Charleston, SC: BiblioBazaar, 2007.

the creation of racial profiling algorithms to predict crime or political outcomes.” It was Carl Linnaeus who gave us the current taxonomies that are still in use to classify all forms of life. Linnaeus wasn’t the first to attempt to classify the world but he certainly was the most successful since his system is still in use to these days.

Carl Linnaeus, considered the “father of modern taxonomy”, born in Sweden in 1707 and died in 1778. He published the first edition of his *Systema Naturae* in the Netherlands, which in turn, became the foundational text of modern taxonomy. He, obviously a paradigm of modesty, used to describe his contribution to science as: God created, but Linnaeus organised.

While Linnaeus developed a system to classify life forms (a binomial system no less, that pinned on us only two genders and tied sexuality into a knot for ever), which is to say, his influence on modern day science, cannot be overstated.

Carl Linnaeus was also an irredeemable, unforgivable racist. In the *Systema Naturae* (which I have to insist again, was first published in The Netherlands), Linnaeus labeled the “varieties” of the human race:

The Americanus: red, choleraic, righteous; black, straight, thick hair; stubborn, zealous, free; painting himself with red lines, and regulated by customs.

The Europeanus: white, sanguine, brown; with abundant, long hair; blue eyes; gentle, acute, inven-

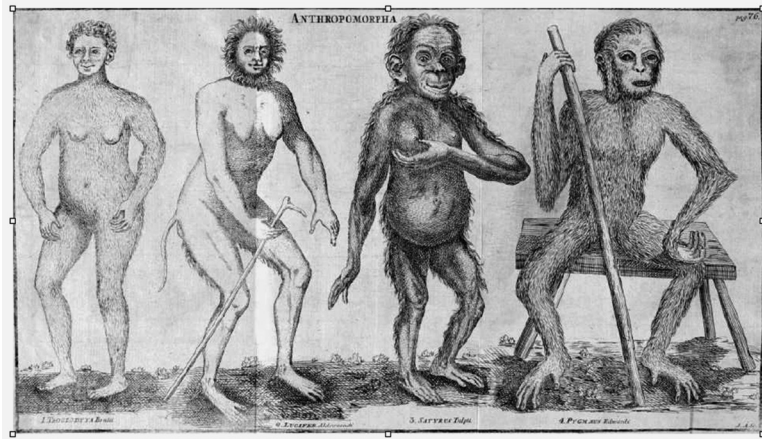
tive; covered with close vestments; and governed by laws.

The Asiaticus: yellow, melancholic, stiff; black hair, dark eyes; severe, haughty, greedy; covered with loose clothing; and ruled by opinions.

The Afer or Africanus: black, phlegmatic, relaxed; black, frizzled hair; silky skin, flat nose, tumid lips; females without shame; mammary glands give milk abundantly; crafty, sly, lazy, cunning, lustful, careless; anoints himself with grease; and governed by caprice.

The ‘Monstrosus’ were mythological humans which didn’t appear in the first editions of *Systema Naturae*. The sub-species included the “four-footed, mute, hairy” *Homo feralis* (Feral man); the animal-reared *Juvenis lupinus hessensis* (Hessian wolf boy), the *Juvenis hannoveranus* (Hannoverian boy), the *Puella campanica* (Wild-girl of Champagne), and the agile, but faint-hearted *Homo monstrosus* (Monstrous man): the Patagonian giant, the Dwarf of the Alps, and the monorchid *Khoikhoi* (Hottentot). In *Amoenitates academicae* (1763), Linnaeus presented the mythologic *Homo anthropomorpha* (Anthropomorphic man), humanoid creatures, such as the troglodyte, the satyr, the hydra, and the phoenix, incorrectly identified as simian creatures.

It was Carl Linnaeus, with his “scientific racism” who allowed the ideologies that justified the enslavement of Africans, the genocides of Native Americans and

Carl Linnaeus' *Homo Monstrosus*

the colonisation of vast areas of the world due to the fact that “the white man” was superior to all the other races. It is through Linnaeus that the coloniser found validation in his sense of superiority to subdue all other races. Finally, Enlightenment-Era Europe had the intellectual basis to occupy, plunder, ravage and begin the centuries long process of resource accumulation that leads to present day capitalism.

And here I want to fully lay down the scope of the importance of this moment and how it has shaped the totality of human history. Scientific racism not only created the conditions that enabled slavery and the creation of an underclass for the purpose of labor exploitation, but its underpinnings justified genocides, wars and devastating colonial interventions.

A brief timeline of the legacy of scientific racism since it's foundation to now, an abridged and

edited version of the more extensive timeline that can be found at the project of The Eugenics Record Office at the Asian/Pacific/American Institute at NYU:

1759: Botanist Carl Linnaeus publishes the 10th edition of Systema Naturae, which is the first to fully describe the four races of man.

1828: George Combe publishes The Constitution of Man Considered in Relation to External Objects, linking phrenology and racial comparison.

1839: Samuel Morton measures the skulls of Native Americans and Black, enslaved people to compare them with measurements of white people expanding the field of phrenology.

1844: Scottish publisher Robert Chambers releases his Vestiges of the Natural History of Mankind, the most popular work of natural history prior to Darwin's Origin of Species. Chambers argues that each race represents a different stage of human evolution with whites being the most evolved.

1866: Physician John Downs defines “Mongolian idiocy” which he argues is a regression to the “Oriental stage” of human development.

1869: Francis Galton publishes Hereditary Genius, outlining his theories on human breeding.

1905: The German Society for Racial Hygiene is founded.

1905: Alfred Binet invents the IQ test for measuring intelligence. 1907: The Eugenics Education Society is founded in Britain.

1912: The First International Conference of Eugenics is held in London, presided over by Charles Darwin's son Leonard.

1933: The Third Reich enacts the first German compulsory sterilisation law.

1933 to 1945: The Holocaust.

2003: North Carolina finally repeals its compulsory sterilisation law.

2014: New York Times journalist Nicholas Wade argues for race-based science in A Troublesome Inheritance.¹⁶

And this is a very, very brief summary of the legacy of scientific racism and how it has informed our politics since the 18th century onwards. It is always interesting to me how we hear a deluge of opinion pieces all over the media, from both the left and right, against the evils of 'identity politics' with nearly no contextualisation as to how these identities came to be and how their formation was foundational to notions of Statehood, capitalism and our understanding of hierarchies and social structures.

16. "Haunted Files: The Eugenics Record Office." AsianPacificAmerican Institute at NYU. Accessed April 29, 2019. www.apa.nyu.edu/haunted-files-the-eugenics-record-office-2/.

But Linnaeus taxonomies did not begin and end with the foundation of scientific racism. We also have to thank his *Systema Naturae* for our understanding of gender and sex. In *Why Mammals are Called Mammals: Gender Politics in Eighteenth-Century Natural History* published by Londa Schiebinger in *The American History Review*:

In 1758, in the tenth edition of his Systema naturae, Carolus Linnaeus introduced the term Mammalia into zoological taxonomy. For his revolutionary classification of the animal kingdom-bailed in the twentieth century as the starting point of modern zoological nomenclature-Linnaeus devised this word, meaning literally "of the breast," to distinguish the class of animals embracing humans, apes, ungulates, sloths, sea cows, elephants, bats, and all other organisms with hair, three ear bones, and a four-chambered heart. In so doing, he made the female mammae the icon of that class.¹⁷

And, she adds:

Linnaeus's nomenclature is taken more or less for granted as part of his foundational work in zoology. No one has grappled with the social origins or consequences of the term Mammalia. Certainly, no one has questioned the gender politics informing Linnaeus's choice of this term. It is possible,

17. Schiebinger, Londa. "Why Mammals Are Called Mammals: Gender Politics in Eighteenth-Century Natural History." *The American Historical Review*, 1993. doi:10.1086/ahr/98.2.382.

however, to see the Linnaean coinage as a political act. The presence of milk-producing *mammæ* is, after all, but one characteristic of mammals, as was commonly known to eighteenth-century European naturalists. Furthermore, the *mammæ* are “functional” in only half of this group of animals (the females) and, among those, for a relatively short period of time (during lactation) or not at all. Linnaeus could have derived a term from a number of equally unique, and perhaps more universal, characteristics of the class he designated mammals, choosing *Pilosa* (the hairy ones—although the significance given hair, and especially beards, was also saturated with gender), for example, or *Aurecaviga* (the hollow-eared ones).¹⁸

And here I have to make an aside, inadvertently, the Comte de Buffon, a known adversary of Linnaeus at the time who scorned at this megalomaniac undertaking offered a peek into the enterprise of enlightenment in one of his rebuttals: *to divide nature's bounty into artificial groups. The bounty that was at the heart of the colonial project.* But to go back to Londa Schiebinger:

It is important to note, however, that in the same volume in which Linnaeus introduced the term Mammalia, he also introduced the name Homo sapiens. This term, “man of wisdom,” was used to distinguish humans from other primates.

18. Schiebinger, Londa. “Why Mammals Are Called Mammals: Gender Politics in Eighteenth-Century Natural History.” *The American Historical Review*, 1993. doi:10.1086/ahr/98.2.382.

*Thus, within Linnaean terminology, a female characteristic (the lactating mamma) ties humans to brutes, while a traditionally male characteristic (reason) marks our separateness.*¹⁹

It is then that we have these taxonomies to thank for the way women are both gendered and racialized: these classifications continue to inform what we see as acceptable standards of beauty, they inform the access to healthcare marred by body related stereotypes that carry a legacy of racial inequalities, and, as importantly, these taxonomical classifications are the basis for the systemic exclusion of trans women from the category of women. After all, if all that makes us women are breasts and reproductive functions, then who is allowed to call herself a woman and who is violently excluded from the pool of womanhood?

Soon after these taxonomies were set in motion, they became the cornerstone for early forms of databases, or proto Big Data projects before there were even digital means of archiving data. The census, then, as one of the early Big Data projects to classify and divide humans into rigid racial and gender categories, separating whiteness from everything else. Every form of data collection done by the State has made use of these racial and gender taxonomies. These taxonomies have informed government policy, aid, assistance programs, healthcare policy and a long list of etceteras that cannot even be covered in a single lecture.

19. Ibid.

And yet, it is all bullshit. All based on pseudoscience that created nonsensical divisions across non-existent racial and gender lines based on the ideas of some 18th century man who had such a superiority complex that he considered himself “god’s organiser”. But here we are. Our algorithms, the entirety of the systems that form the backbone of our technologies and cultures operate on this pseudoscientific paradigms. And this is why I consider algorithms to be a form of esoterica, not different than cartomancy, astrology or prediction by sacred geometry. In all cases, all these technologies not only share a common origin as part of both institutions and individuals who pursued them vis a vis their interest in occultism but also because algorithms are generally viewed as infallible oracles that predict outcomes based on operations that remain inaccessible to the untrained eye.

In April of 2018, Edward Burmila, an assistant professor at Bradley University, wrote in *The Nation*:

Judging by the headlines, pseudo-scientific racism is making a comeback. Nineties-relic Charles Murray (The Bell Curve) is popping up on campuses and in conservative media outlets, much to the delight of those who think his graphs confer legitimacy to their prejudices. Atheist philosopher and podcaster Sam Harris is extolling Murray’s highfalutin version of racist graffiti as “forbidden knowledge.” New York Times’ increasingly off-the-rails op-ed page gave genetics professor David Reich the opportunity to

write that “it is simply no longer possible to ignore average genetic differences among ‘races.’” And Andrew Sullivan, as ever, is fervently repackaging Gilded Age eugenics for a 21st-century audience. They and the “intellectual” tradition they represent have allies in high places now. When President Donald Trump told members of Congress in February that the country needed fewer immigrants from “shithole” countries and more from countries “like Norway,” I did a double-take. Having studied what’s now called “the racist movement” that stretches from Charles Darwin to the outbreak of World War II, Trump’s language was nearly identical to the rhetoric of Nordic superiority during that period.²⁰

I started this lecture with an introduction to the work of Persian mathematician and astrologer Muhammad ibn Musa al-Khwarizmi, whose contributions to the field of predictive technology were so important that the word algorithm itself carries his name. Yet, many of his areas of study, as well as the areas of studies of other similar scholars (including Isaac Newton, no less) are dismissed as pseudoscience and the realm of charlatans and carnival attractions. Astrology, tarot or the occult have no place in ‘serious’ predictive technologies. Yet, the racist ideas of these snake oil salesmen continue shaping our worldview and we carry them in our telephones, computers and game

20. Burmila, Edward. “Scientific Racism Isn’t Back—It Never Went Away.” *The Nation*. April 06, 2018. Accessed April 29, 2019. www.thenation.com/article/scientific-racism-isnt-back-it-never-went-away/.

consoles every time an algorithm predicts who we are and what we like based on our ethnic, gender and class profiles.

Throughout this year I have undertaken a research project about the coloniality of the algorithm. Taking on Anibal Quijano's and Maria Lugones arguments about coloniality as an ongoing project that remains long after the coloniser left, I have tried to trace the many ways in which our contemporary technologies continue reproducing these epistemic models of occupation.

It is via Maria Lugones' *Coloniality of Gender* that I recall Anne McClintock's *Imperial Leather*, where she writes:

*For centuries, the uncertain continents—Africa, the Americas, Asia—were figured in European lore as libidinally eroticized. Travelers' tales abounded with visions of the monstrous sexuality of far-off lands, where, as legend had it, men sported gigantic penises and women consorted with apes, feminized men's breasts flowed with milk and militarized women lopped theirs off. Within this pornotropic tradition, women figured as the epitome of sexual aberration and excess. Folklore saw them, even more than the men, as given to a lascivious venery so promiscuous as to border on the bestial.*²¹

21. McClintock, Anne. *Imperial Leather Race, Gender and Sexuality in the Colonial Contest*. New York, NY: Routledge, 2015, 22.

The uncertain continents! The territories to be occupied and plundered were viewed as uncertain continents which, given the topic of this symposium seems like a very apt framework. It is, perhaps, that an Eurocentrism that has claimed a hegemony on 'the rational' and 'the logical' requires its predictive technologies to be dressed under a veneer of science and 'enlightenment values'. The thinking, rational man cannot consort with the astrologer or the tarot reader. That is the realm of the unthinking, the savage, the uneducated, those of us who hail from the uncertain continents.

In *The Missing Chapter of Empire*, postmodern reorganisation of coloniality, Santiago Gomez asks: "Is there only one world or are there various possible worlds?"²²

And I want to make some of his words mine when he says he wants to reformulate this question in the following way: is it possible to share a single world where many worlds are possible? Or to put it yet another way, is it possible to share a world where different ways of knowing that world can coexist and complement each other? A world where epistemological plurality can be recognized and valued?

Unfortunately, it would seem that the answer to these questions would have to be a 'no' because to this day, at least for the last 500 years, it has not been possible to recognize the epistemological plurality of the world. Like Gomez insists, and in this he echoes Quijano and Lugones, a single way of knowing the

22. Castro-Gómez, Santiago. "The Missing Chapter Of Empire." *Cultural Studies* 21, no. 2-3 (2007): 428-48. doi:10.1080/09502380601162639.

world, the scientific-technical rationality of the so called West, has been postulated as the only valid episteme. Like Walter Mignolo has also stated, all other ways of knowing the world have been relegated to the sphere of opinion or belief.²³ These beliefs, in turn are even considered an 'epistemological obstacle' to attaining the certainty of knowledge.

I want to end these musings on astrology, science and algorithms asking if, perhaps, science itself with its computational calculations based on racist interventions and stubborn attachment to artificially created categories is not what stands as an obstacle to the certainty of knowledge.

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23. Mignolo, Walter. *Local Histories/global Designs: Coloniality, Subaltern Knowledges, and Border Thinking*. Princeton, NJ: Princeton University Press, 2012, 9.

LOST THE KEY, THE SECRET
HOLLY CHILDS

THREE STARTS:

1. You're weird to begin with. And you are dragged through a conversation filled with blanks that feel eternal, chalky, mutant but half-muted gaps like replies to privates that pop up public, minus the personal to which they refer. You can attempt the construction of your own meaning from the parts to which you have access, you might discern a wiggly little answer, you'll get *a* gist, it just might not be *the* gist, because you don't know the question to which you have the answer.

2. So let's write about what will fill the gaps in the environments, and in conversation. For some: You know once they get home they will just be realming again. Flowing to sea. Important to know that's not the only river and that fast flowing bits barely move the OKRA river—

3. The starting point, the genesis, what it was like before you arrived: Nalgene and I pause by the side of the main road. I am walking Nalgene to a place she's never been before but that everyone knows, whether they've been there or not. It's a hot day, a tram rolls by loud. We share a carton of milky oolong.

"Oh yeah, and also when I think of going inside I get a subliminal scene of a circle of people passing a drink, including two girls who are just there, both sucking and drinking because they're anxious about being next to each other in the circle, actually consecutively sipping, passing DNA, lip balm trace, smelling, breathing, slow inhales, deeply connected, like snakes ratkinged into a celtic knot, knife in toaster, pictures of last meals, but burnt..." Nalgene fades, she looks up at the mega mall ahead of us. "It must be to do with the kerning on the standard logo, something subliminal," she whispers. "O-K-R-A," she spells out, "like 2 people giving head to one another under a table."

"Should we go in now?"

"Yeah, but before we do this, can you please also write down that I usually don't identify as being an anticipator? Like, usually I only outline my anticipation after the fact, like when things I've experienced have deviated from my expectations."

As we walk past a bike shop, I respond, "I'm interested to understand how someone, who doesn't anticipate, experiences desire—"

"Hmmm same," she interrupts me. "I mean, I do think anticipation is a bit more in or, like, on the stratum. It's ... surface-y. And then desire happens beneath that." While speaking, she's doing hand gestures to reinforce her metaphor, a spiral created with her whole arm, and then spiked fingers used to demonstrate the force of desire— "Desire is a force of movement *beneath* anticipation, but the

way I approach future scenarios isn't so much with anticipation or with an idea of "what will be". I don't really form pre-images in-depth. Maybe I have some inkling, but then it's just like, well, writing in pencil, or the phrase "we'll see" but not used in a passive aggressive sense.' We turn a corner. "Well, this is different already. I'm trying to be in the now; it hurts to do nostalgia. But potentially many other people are not in the present; they are in the past, or in the future, in false hope, exhaustion drag, whatever. I like it in here."

I point out to her that we're not actually inside yet, this is still just a regular mega mall, but I'm relieved that Nalgene is feeling positive about our approach to our destination, not bored or... She continues, "But, like, how can you be in the future? If I'm hanging out with someone more future-oriented, what is the relationship between our bodies? I mean obviously not literally past and future. Ideas of fourth dimension are—" a staff member rolls a metal frame across the mall which makes a grinding sound that obscures Nalgene's words, "—time dimensions. It's like making lineariaaaron¹, like, they, the dimensions, are folded into one another or whatever—" the guy keeps rolling the loud thing past, "—so they are layered into meaning and narrative. You can make any number of dimensions by creasing the folds in different ways. We understand four dimensions but I also have this feeling of "5D" being the body over-

1. Not sure exactly what she meant by this, but when I looked at my watch it was about 40 minutes later than I anticipated so maybe it did something? (onomatopoeia of clock time stretching and groaning)

coming linearity and existing in various times at once. And moreover, I have the feeling that anyone can navigate like this but we generally choose not to because it's not conventional, and thus extremely alienating. But there are different kinds of simultaneity other than temporal ones; like, preempting this conversation, I posted this morning that I would be in the sixth dimension today but I wonder if my followers get that they can still call me and I'll answer from a different plane. But like all content, it's contingent on whether people are really paying attention. I think I'm contradicting myself. This still isn't where we're going yet, is it.

"I just think it's just funny that you can move through space and time, just not backwards. Books and movies are telling stories of the past. Garments, art; it's all time travel. We're all time and space travelers from the past."

"Do you think the pets stay in the pet store when it closes at night?" She's realming.

If u want to say the same thing a different way describe it through time. If u want to say the same thing a different way you could try describing it through space; or: eyebrow pencil, camouflage, slogan in college font or army print on an extra's jumper, walking past, wheeling disruptive noise...

"What's the point of grappling?"

The Key is: two drinks each, colour blocking on sports team clothes, many logos repeated over sleeves chest, etc, turning around mid-sentence to render opposites real at once.

There's less need for us to be saying it to each other because we're together. And I'm not going to posit that we're telepathic, I literally have no idea what Nalgene means. "I guess we're here now." I'm not sure what I want out of this, wasting time, experiments.

"You can be as cracked as you want in fiction," she continues, "But if you say you believe what you believe outside of that, it sounds really 'conspiracy theory,'" finger quotes, "But if you put it in a story people can accept it." Looking around at her environment she continues, "OKRA's a bit more colourful than I expected, but maybe I expected it to be more colourful than I expected," she says. "Baby. I have to be careful with games like dog in a manger, like he wants it, I have it. Warehouse sky's the limit. I wonder if they have real power sockets in here. Or are they props, you reckon?" backstage of OKRA looks more minimal, relaxed, writing a lot, take it home today, stacks of sofas and a light breeze, different shades of sofas.

"It's fine to be in OKRA, the goal is to be in OKRA and nothing else and the reward is the cafeteria," she says, not listening. "Chill out, Holly," she responds to next to nothing. "Also, I just realized you chronically confuse or interchange the 'goal' and the 'reward' in almost all situations."

To be in OKRA when the endurance test chair snaps; you are not made of wood, so why would that bother you? All the pressure is on these screws here. Let's sit down on them. Oh yeah it's quite nice it's quite comfortable it's very nice.

Enfold me.

"I had this idea that they wouldn't let you go backwards in here." Nalgene.

"Would u like to try a Swedish meatball while u 'shop'?" asks an extra, sliding in from the side. Her shirt says, 'Beside display plants etc.'

Everything about everything else, everything about everything else and consequences, both positive and negative, all these huge fake televisions.

This is hard but we don't have to be silly, we're trying to get 'NEW' box with lid, \$2.99, be anecdotal

"Getting to a new place every day and acceptance," she says, "A new day every day and the only goal-reward —same thing— is wording, texting, but then there's always more to process, some things of course do not interest me. Excuse me can I just get to that there?" she asks someone testing a showroom mattress.

"Pretty progressive," she bangs the wardrobe door closed by the side of the bed. I keep hearing shoppers saying 'Nalgene' but might be real and might not be

"Nalgene, I wonder who we're visible to" I wonder out loud.

Now playing: "Un— break— My— Heart—" phases in background, warping space, and an OKRA patch on left shoulder blade of an employee. 'Beside display plants etc' written down her sleeve.

Could I ever get bored of this? OKRA. We're not going to do it every day, no, you just jam it in there as an experience. Yes, it will be ok, a baby screaming harmonises with Un-break My Heartttt— made

from soft rubber no sharp edges to bump against. Nalgene walks into the room next to ours, “we’ve been here, we’ve fuckin been here mate, fuckin meatballs mate,” she says kind of shuddering walls; performative depressed winter girl with amazing eyes, a jokey coping strategy. “I knew they wouldn’t let us go backwards.” she says.

Battery at 4%, “Do you wanna go?” I ask.

Nal walking away from me misses my line, “I can’t wait to get to that section, you know, the place that isn’t there...” she’s getting smaller and smaller as she moves away.

I wonder, does her “I can’t wait” count as anticipation? Finally? I don’t really need to be interrogating her expression to try and prove her wrong. I focus on a male model wandering through kitchen settings, I keep coming back to how stealth the visual merchandising is here. Props bought to be worthless, to accompany the products, computers, stiff little trees, duh, I’m hot there for a second. “It’s supposed to be a fridge”, says Nalgene, beside me again. “Naaahhoooh—wait— yeah, definitely it’s a fridge.”

I’m kind of thirsty we left our bottle some place we can’t go back to in lieu of hydrating, it’s so basic: blocking mode on, connecting home, experience centre, black sea nail kit, brave new nothing but I’m pretty dehydrated so it’s coming out wrong: if you follow the track it will lead u always exactly 180 degrees wrong, and you will drift, and you will sway, and you will live a long and jumbled life.

“Nalgene, if you don’t anticipate, do you ever find yourself in situations you assumed you would be into but that you really don’t enjoy once you get there?” I ask.

“Yeah sometimes, like, I’ve had times where “oh no, this isn’t ideal, I feel like I should have known”, but less and less frequently now.”

Lost the Key, the Secret was first published in a different form by Australian publisher Chart Collective in 2017, edited by Jocelyn Richardson and inspired by conversations with Max Trevor Thomas Edmond.

Holly Childs (NL/AU) is a writer researching relationships in systems. A postgraduate researcher in The New Normal 2017 program at Strelka Institute, Moscow, and author of *Danklands* (Arcadia Missa, 2014-7) and *No Limit* (Hologram, 2014). Recent works include: audio performance *Hydrangea* with J. G. Biberkopf (2019); writing for Angela Goh’s *Uncanny Valley Girl*, (2017-9); *Patternist*, a collaboratively developed sci-fi urban exploration AR game (2017-19); *Have The Dusk Deepen*, for SOd (2018) and *Rogue Agents* curated by Auto Italia, Firstdraft, Sydney (2017). The Lifted Brow’s Experimental Non-Fiction Prize runner-up (2017), a founding editor of Worm Hole (2015-6).

WHAT IF TECHNOLOGY WERE A PRAYER?
INTERVIEW WITH KENRIC MCDOWELL,
DANAE IO

Kenric McDowell co-leads the Artist + Machine Intelligence program at Google Research, facilitating collaboration between Google AI researchers, artists, and cultural institutions. Alongside twenty years of experience in software design and engineering, Kenric also has an MFA in photography and regularly performs acoustic and electronic music. In this exchange, we speak about the relation between divination practices and machine learning, multidimensionality of neural nets as an alternate thinking schema, as well as the role of predictive algorithms in constructing the plausible instead of the possible.

[DI]: How did you become interested in esotericism and divination practices?

[KM]: I became interested in esotericism and divination as a result of studying esoteric physiology. In my early twenties, I had experiences doing hatha yoga that forced me to learn about the energy maps of the body that exist in Vedic philosophy. As a result, I spent decades obsessed with meditation, yoga, and esoteric knowledge systems from Asia, South America, and Europe. Nondual systems like Kashmir Shaivism, Dzogchen Buddhism, or Taoism most accurately describe the experiences I've had. I frequently use the I Ching for reflection on important decisions I make in my daily life. Working with plants is also an important path for me.

[DI]: How did you begin working with Machine Learning and what brought you to Artists + Machine Intelligence at Google?

[KM]: I came into my current role through a conventional path that became strangely serendipitous. I was working as a user experience prototyper on a design team embedded in AI Research. I worked on speculative product prototypes that used AI, and helped formulate models of AI interaction in products. When trippysquirrel.jpg escaped onto the internet mid-2015, Google released DeepDream, and my director Blaise Agüera y Arcas formed a group to exhibit work made with DeepDream. As the only person with an MFA in a then 150-person research team, I volunteered to lead the group. We converted a one-night event budget into an informal artist grant and collaboration program, and officially launched the *Artists + Machine Intelligence* program in February of 2016.



Trippysquirrel.jpg on www.reddit.com. Originally posted on June 11, 2015 and captioned: "An image created by an A.I."

[DI]: With regards to esotericism and practices of divination, such practices often have an anticipatory relation to the future, becoming methods of foresight. At the same time, Machine Learning (ML) is overwhelmingly used for the purposes of prediction (predictive text, predictive policing, targeted advertising etc.) how do you see the relation between these modes of anticipation?

[KM]: Older divination systems are based on cosmologically foundational symbols within a culture. For example, we can look to the yin and yang lines of the hexagrams that govern the I Ching and the eight elemental trigrams they compose, or the archetypal symbols of the Tarot. To work, these symbols must lock into underlying patterns of nature or the mind. Current predictive systems for policing, advertising, co-writing, etc. are trained on data sets arising from social systems positioned within a singular historical milieu: modernism, with its colonial roots. With several centuries or millennia of integrative practice, new ML systems might absorb the foundational symbolic potency of older divination methods.

[DI]: There is also something about interpretation, legibility and agency that differs a lot between older divination methods and current predictive systems. I find that in older divination practices the level of interpretation can be performed both by the reader and the person who is being read, and the div-

ination method is a system in place to structure that interaction. Agency in that case is distributed along all things and people partaking the divination. On the other hand, in current predictive systems the receiver of a prediction is not afforded the chance to do the interpretation; leaving them in a position of little if any agency. Do you agree with that position? Do you think that there is a way of overcoming that logic?

[KM]: Of course it's difficult to generalize, but you are correct about the role of interpretation and introspection in readings. Working with the I Ching requires an absorption of Chinese philosophy that reshapes the reader through introspective application of the hexagram and commentary. This process bears fruit outside of the specific question addressed by the oracle as one becomes attuned to Taoist and Confucian ways of approaching problems. This is as much a part of the process as receiving an answer to a question. Although, the I Ching has also given me great stock tips.

These older systems and their integration of inner perception and outer manifestation are impossible according to materialism. In a materialist view, an oracular reading is random or purely a psychological projection. The causal power of a predictive policing system is much more clearly mappable in contrast, and its creators are our contemporaries, not our ancestors. These might be the deepest rifts

between divinatory and predictive systems and a very good reason to distinguish them from each other.

[DI]: You have stated before that “In the 21st century art, technology and spirituality will merge, it is just really messy right now.” In which way do you think that these will merge and how do you understand the role of corporate interests that lead technological development being carried forward into this merging?

[KM]: We can read spirituality, art, and technology, as ways of mediating relations with the unknown or unknowable. Spirituality actively seeks it out, art translates it into form, and technology (at least in the American west coast formulation that dominates digital platforms now) extracts an infrastructure from cultural experimentation. The social and conceptual experiments that gave rise to the 1960s counterculture, and ultimately Silicon Valley, are an example of this process.

This translation of the unknown into infrastructure through cultural experimentation is not well articulated or understood. The resulting ambiguity has allowed for conflation of engineering and problem solving with revolutionary social good. Such identification has animated Silicon Valley for decades, despite the obvious blind spots it produces. Tech is now approaching health, consciousness and pharmacology as areas for developing social infrastructure. This infrastructure could become an appa-

ratus of deep control or a platform for expansion of human consciousness and potential. Whether this plays out as integration or extraction will have everything to do with the role of women, indigenous, and earth-centered people and cosmologies in that process. This is critically important.

[DI]: I would think that it can be an apparatus of deep control as well as a platform for expansion of human consciousness, simultaneously. In some ways it already is both in the sense that large tech firms operate as apparatuses, exercising control over various situations, such as the Facebook–Cambridge Analytica scandal, yet technological infrastructure has already become an extension of the thinking of many people.

[KM]: Yes, it is and will be both, and will alternate between modes of extraction and integration, as the internet does.

[DI]: What is an example of integration or extraction? I wonder whether any system that aims to integrate all epistemologies doesn’t at the same time transform them, echoing colonial practices.

[KM]: Precisely, because agency is still centered in the platform. The appropriation of technical platforms and programs by a local perspective and through a local cosmology (after Yuk Hui’s cosmotechnics) is one way to imagine an anti-colonial alternative.

[DI]: I find very interesting the way you have spoken about machine learning in relation to multidimensionality and hallucination. It seems to me that you are suggesting machine learning can propose a paradigm or rather a schema which will allow humans to incorporate this multidimensionality in their thinking. Could you expand on the relation between machine learning and multidimensionality? Do you see neural nets as a way of overcoming the binaristic basis of computing? Also how do you see multidimensionality as a form of cognition?

[KM]: The underlying geometries of our technologies become subconscious influences on our lives. In the 90s Marshall McLuhan's axiom "the medium is the message" was a mantra for evangelists of the network. Now networks profoundly influence our economy, elections, global political movements, aesthetic trends, etc. providing a metastructure that conditions everything. I see high-dimensional machine learning models poised to perform a similar transformation on culture.

Works generated with ML hallucination can be described as movements through the latent or high-dimensional space of a neural net. Where a 3D spatial system has dimensions for x, y, and z, neural nets have much higher degrees of dimensionality, which can be imagined as a type of space. For example, an image recognition system might have hundreds of thousands of "axes", and an address could be generated with a location on each one.

I began to develop a felt sense of these high-dimensional spaces when viewing visual artworks made with AI. But the same sense can be generated around non-visual data. When I saw a mapping of high-dimensional survey data about gender identification and expression created by my director at Google AI, Blaise Agüera y Arcas, it became clear to me that high-dimensional systems could help us experience ourselves outside of restrictive binaristic categories of identity. A binaristic model allows two choices and a spectral model allows for a continuum. But models that take into account many aspects of gender expression (sartorial, behavioral, linguistic, physiological, etc.) can be mapped in high-dimensional space then visualized in two and three dimensions using algorithms like UMAP or t-SNE, to reveal a complex space of possible gender expression that doesn't conform to a simple binary or even a continuum.

In general, I would characterize multidimensional cognition as thinking with patterns rather than data points. This pattern-based cognition scales to very high levels through organic methods like meditation or co-cognition with other living intelligences like plants, animals, ecosystems, and planetary and star systems. Ideally, can reflect this to ourselves through machine intelligence.

[DI]: Could you give me an example of a work with ML hallucination that had an impact on you?

[KM]: Jenna Sutela's work *nimiia cétii* hallucinates language through the motions of a slime mold controlling a neural net. This type of interaction between human and non-human intelligence, while very avant-garde in style and presentation, points to an opening with broad social implications. If we can think of our world as one inhabited by many forms of non-human intelligence, we may begin to see the living beings that surround us and we may start to respect their intelligence. If we can't perform this simple act of seeing, we are too myopic to responsibly create synthetic non-human intelligence.

[DI]: Hallucination seems to be a theme that you return to, both through your work in *Artists + Machine Intelligence*, but also you have spoken about it in the context of hallucinogenic drugs. Do you consider hallucination as a means of re-arranging the normative limits of perception?

[KM]: Current neuroscience shows that psychedelic hallucinations produce greater degrees of connection between neurons, an increase in dimensionality. This type of hallucination is clearly a means of re-arranging perception, and the neuroplasticity it generates has proven to be healing for disease like PTSD.

[DI]: Why is hallucination a preferred means? I am also thinking of the increasing use of hallucinogenic drugs among tech-workers, either by microdos-



Jenna Sutela: *nimiia cétii*, 2018, video still.

ing LSD at work or taking ayahuasca to reach higher levels of 'innovation' or 'creativity'.

[KM]: The simple introduction of greater degrees of neuroplasticity will produce creativity or innovation. But this refactoring of indigenous practices into usable strategies for platform capitalism is at the heart of the extractive relationship Silicon Valley has with counterculture and the "others" it mediates into mainstream culture (like Eastern meditation practitioners or South American curanderos). This connection between colonized peoples and the center of Western technical dominance can be another point of extraction or it can be a lever into the hearts and minds of the people creating global infrastructure, depending on which voices are centered.

[DI]: Listening to one of your talks you expressed that it is your “responsibility to study magic because it is the oldest, more established tool to deal with the universe as it really is.” Could you expand on why do you think magic is an important area to study within the current socio-political structures?

[KM]: We need to radically reframe our relationship with Earth if we are to survive the effects of our technologies. Part of the matrix of belief that limits our perception are Christian and colonial notions of time and futurity that inform modernism and rational materialism. Jailbreaking our minds from these limiting fundamental beliefs is a good first step toward empathizing with subjects excluded from the global power structure. For example, one common side effect of engaging magical systems is an increased understanding of our ancestral relationships and the perception of ourselves as ancestors. This disconnection from our own ancestry and ancestorhood makes it possible for us to consume resources the way we do.

[DI]: How does your study of magic inform your thinking of machine learning and more broadly AI?

[KM]: Seeing symbolic and predictive systems as potent, empowered, extensions of mind into matter brings a gravity and sense of responsibility to one's work. If we take seriously the idea that our intelligences engage with a living, enchanted, planet,

society, and cosmos, we can find a sacred duty in our work with technology. Ethics are an important first step, as they open the door to a deeper consideration of the nature of our technical heritage. But we can go further. What if technology were a prayer?

[DI]: In my understanding of ML as a form of computing that evolved out of statistics its primary focus is to identity the probable, the plausible. I wonder how ML's ubiquitous use in processes that vary in scale and scope—from assigning the amount of refugees in each European country, to suggesting text for this email I am writing to you—constructs the plausible rather than the possible. Is there a way that ML does not become a means of instantiating the plausible according a Western view of the world with its taxonomies and stereotypes?

[KM]: This is a great question. From a cultural point of view, we can begin by expanding the perspectives and epistemologies that feed our supervised ML systems, and who it is that creates them. This basic first step would mark an important and necessary change, and requires critical consideration of the processes and power dynamics involved in creating ML.

From a technical point of view, I see you describing the closed aspect of what are called supervised learning systems. Supervised learning systems are trained on labelled data sets; they can only know what we've told them, and we can only tell them

what we can know and express in written language. Reinforcement learning systems, on the other hand, are goal-driven, and derive functions for a system to achieve an outcome. This, to my mind, promises a closer mapping of intelligence as such. To put it in esoteric terms, does consciousness exist in a taxonomy? Or does it exist in the world? And if it exists in the world, what is required for intelligence to absorb consciousness into itself?

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ARTIFICIAL INTELLIGENCE:
WARPED, COLORFUL FORMS AND
THEIR UNCLEAR GEOMETRIES
RAMON AMARO

In *The Ceremony Found: Towards the Autopoietic Turn/Overturn, its Autonomy of Human Agency and Extraterritoriality of (Self-)Cognition*, Sylvia Wynter introduces the concept of autopoietically instituted living. For Wynter, autopoietic instituted living is a dynamic site of empirical ordering, set forth by the conditions of colonialism and the extension of the humanist project into the construction of the ideal form of Man. The architecture of this project was dependent upon, as Kara Keeling has argued, the positioning of the racialised body as visible only in as much as they could be brought into being via empirical forms of knowledge. As consequence—returning to Wynter—these spatio-temporal coordinates are not only predicated on the humanist imaginary, but also constitute a “lawlike correlation between our modes of knowledge production and the auto-institution of our social realities.”¹

The auto-institution of social reality is an important notion in Wynter’s thesis, as it illuminates the colonial relation as the product of an extensive network of data that are extracted from the site of the colonial co-ordinate—a co-ordinate that comprises what she calls the bioepisteme, an operative function that replicated the ordering of social reality through data and the imaginary of hierarchy. For Wynter, however, this system is recurrent, organic, and self-producing of the relations found within it.

1. Sylvia Wynter. “The Ceremony Found: towards the autopoietic turn/overturn, its autonomy of Human agency and extraterritoriality of (self-)cognition,” in *Black Knowledges/Black Struggles*, ed. by Jason R. Ambrose and Sabine Broeck. Liverpool: Liverpool University Press, 2015, 203.

In this case, the continual reinstatement of whiteness as the centre of species relation. This centering enacts a fictive mode of truth, or what Lewis Gordon defines as a white prototypicality that understands itself as the standard through which the ideal model of species exists.² Gordon turns to Wynter’s interpretation of Fanon to illustrate the psychic strain this imposes on the racialised figure within an autopoietically instituted living system.

Humberto Maturana, Francisco Varela and Ricardo Uribe developed the concept of autopoiesis to explain the phenomenon of living organisms and their cognitive capacities.³ An autopoietic system, therefore, is an enclosed and autonomous system that distinguishes living from non-living systems. It describes living organisms as ‘self-producing’ and the nature of perception and intelligence as subject-dependent. Autopoiesis is also a generative process of recursive re-creation, particularly of the self. According to Maturana, Varela and Uribe, an autopoietic system is realised in a particular structure and is independent of its environment.⁴

A key point of the concept of autopoiesis is the relation Maturana, Varela and Uribe establish between closed recurrent systems and cognition.

2. Lewis R. Gordon., “Is the Human a Teleological Suspension of Man? Phenomenological Exploration of Sylvia Wynter’s Fanonian and Biodecan Reflections,” in *After Man, Towards the Human: Critical Essays on the soul of Sylvia Wynter*, ed. by Anthony Bogues. Kingston: Ian Randle, 2006.
3. Humberto R. Maturana., Francisco J. Varela. *Autopoiesis and Cognition: The Realization of the Living*, Boston Studies in the Philosophy of Science, v. 42. Dordrecht, Holland ; Boston: D. Reidel Pub. Co, 1980.
4. For a detailed description of Maturana and Varela’s concept of autopoiesis, see John Mingersn. “The Cognitive Theories of Maturana and Varela.” *Systems Practice* 4, no. 4 (August 1991): 319–38.

In general, cognition refers to the assimilation and use of knowledge, and as such is limited to beings with complex nervous systems.⁵ Although research on cognition has advanced significantly, Maturana, Varela and Uribe believe that both cognition and perception are linked in the operation of the nervous system, which is realised through the autopoiesis of the organism. Since the survival of autopoietic systems depends on the continuation of recurrent interactions, consequently, the organism retains a knowledge, if only implicitly, that extends to cover the organism's various interactions. In other words, as Maturana et. al. describe, the organisation of cognitive systems themselves define the domains through which they act.⁶

In applying the autopoietic schema to the colonial imaginary, Wynter grasps the layered patterns of global systems of knowledge, such as colonial and imperial expansion, which function as categorical systems that both produce and reinforce cultural and political ideologies through a series of code.⁷ Wynter surmises that the enactment of the code of what constitutes colonised life operates at the level of the psyche which is furthermore entangled in a society's system of learning. It is believed that these codes must necessarily correlate or even determine the study of humans, nature and the terms of social praxis.

5. John Mingers. "The Cognitive Theories of Maturana and Varela." *Systems Practice* 4, no. 4 (August 1991): 319–38.

6. Humberto R. Maturana and Francisco J. Varela. *Autopoiesis and Cognition: The Realization of the Living*.

7. David Marriott. "Inventions of Existence: Sylvia Wynter, Frantz Fanon, Sociogeny, and 'the Damned'." *The New Centennial Review* 11, no. 3 (2012): 45–89.

Wynter also associates the construction of autopoietic social praxis with the instrumentalisation of science. To do so, she turns to the episteme—a scientific term also adopted by Foucault in *Archaeology of Knowledge* to describe the coexistence of a set of relations that form the conditions of possibility (or knowledge) in a given historical period.⁸ Foucault initially restricts the episteme to the distribution of scientific knowledge as a mode of power, but expands the concept in later writings to account for other forms of knowledge produced outside of scientific academy. As Foucault has argued, they remain invisible, concealed or 'epistemologically unconscious'.⁹ Foucault has shown that the episteme operates under discrete forms of mundane practices and solutions. Furthermore, the episteme is a means by which the Other is not only brought into being, but made visible as difference in itself. Here, the Other embodies the normalising forces of power—in this sense instrumental reason, which is executed under the democratisation of calculus. By this, Foucault means the integration of dynamic modes of ordering and organisation in society. These forces are strengthened through the enforcement of the right to disseminate rhetorical truths.

An immediate parallel is drawn between Foucault's outline of power and subject composition and Fanon's assessment of colonialism as well as the constitution of the colonial subject—a proposal

8. Michel Foucault. *Archaeology of Knowledge*. New York: Routledge, 2002, 211.

9. Keith Alber Sandiford. *Theorizing a Colonial Caribbean-Atlantic Imaginary: Sugar and Obeah*. Routledge Research in Atlantic Studies 5. New York: Routledge, 2011.

Fanon puts forth in his Tunis lectures, arguably prior to Foucault's notion of biopolitics. While both Fanon and Foucault are concerned with the distribution of power, their schematics depart in their unique treatments of the initial conditions from which the Other is constituted. On the one hand, Foucault presupposes a more general distribution of the means of power that brings the Other into view. Although Fanon does not mention Foucault explicitly, he is critical of discourse that prioritises the means of subjection as universally embodied.

Fanon places particular emphasis on the construction of race as the negation of being, where the subject is brought into being only as much as it can be disregarded as a non-subject or the subject of non being. In *Black Skin, White Masks*, he argues that this epistemic relation—or what he describes as a 'drama' of discovery—precedes the Enlightenment principles of Man and the fantasy of a world built in his image. Fanon, like Foucault, situates surveillance as a mode of visibility, a technology through which colonialism distributes power as a suspicion of the Other. For Fanon, the colonial view is as much a part of the constitution of the colonised as is the embodied effects of biological sorting. This composition extends beyond the corporeal body and into the universal perception of blackness, which is exposed by stereotypes and emboldened by the distributed power of interpellation. It re-articulates the framing of life and death, put forward by Foucault and Mbembe, as that which instead exhausts simultane-

ously within the composition of the colonised. The colonised body, in this sense, lives as a universal form of history yet is exposed as the negation of life itself in the physiological expression of the present.

The result is what Simone Browne calls 'digital epidermalization', or methods by which power is exercised through the disembodiment of the Other under the gaze of surveillance and other technologies.¹⁰ Here, Browne demonstrates the fragility of the technological gaze which is enacted under the alienating logics of truth and categorical reasoning. Nonetheless, in doing so, Browne builds upon the dissonant relationship blacks have had historically with Anglo-centric technologies. As Browne argues, understanding this relation is fundamental to any discourse on surveillance and the ethics of technology. This is particularly important considering the prevalence of discourse today that centres the technical object as the subject of investigation without thorough (if any) insight into how these technologies and the social space are shaped by colonialism and imperial expansion. By connecting data to power and knowledge, researchers can be implored to consider how data might replicate the immediacies of discrimination and determinacy. As Browne has shown, the logics of classification are enduring in their ability to stall the building of self-knowledge in the present while also regulating the existence of

10. Simone Browne, *Dark Matters: On the Surveillance of Blackness*. Durham, North Carolina: Duke University Press, 2015.

certain bodies, even after death. They also speak to the immediate shaping of public space.

In *The Panoptic Sort: Political Economy of Personal Information*, Oscar H. Gandy also considers the roles data and classification play in “the reduction of life chances” under, what he terms “a panoptic sort of data.”¹¹ Gandy conceives of the panoptic sort as a type of data that extends beyond general surveillance and the panoptic paradigms of disciplinary power, as theorised by Foucault. The panoptic sort is an ‘all-seeing’ discriminatory apparatus that classifies individuals on the basis of their estimated economic or political value, and is continually optimised for the efficient transfer of value into data and information that, as argued above, dislocates and reassembles bodies under the temporal and spatial objectives of the institutions that ‘own’ and circulate the data.¹²

For Gandy, statistical classifications re-figure the universal position of surveillance, as they typically have a disproportionate effect on black and racialised individuals. As such, they become the classification of blacks which then becomes a key characteristic of capital exchange, as well health, education, and other institutional policies. As Haggerty and Ericson describe, “the moving about between environments and activities that has become a key

11. Oscar H. Gandy.. *The Panoptic Sort: A Political Economy of Personal Information*. Critical Studies in Communication and in the Cultural Industries. Boulder: Westview Press, 1993.

12. Kevin D. Haggerty, and Richard V. Ericson.. “The Surveillant Assemblage.” *British Journal of Sociology* 51, no. 4 (December 1, 2000): 605–22. See also: David Lyon: . *Surveillance after September 11*. Themes for the 21st Century. Malden, Mass: Polity Press in association with Blackwell Pub. Inc, 2003.

characteristic of post-modern life, has also become a source of value to be realised on the market for commodified information.”¹³

With the power of statistics, Gandy warns that while data renders individuals visible for governance, it has very real and immediate effects on the life chances of black and racialised people. According to Gandy, the regulatory of effects of data—as marked by race, gender, and socioeconomic bias—disadvantage some populations while privileging others, even though both are often read, discursively, as if they exist under the same universal scope of power.¹⁴ Transactions of the every day, from credit card transactions, online payments and browsing habits, customer reward programmes, barcode scans, digital access points, biometric sampling to job applications and drug testing are just a few examples of the means by which blacks are targeted for exploitation, discrimination, redlining, criminality and suspicion, as described in the Introduction. As Gandy suggests, any discourse on the biopolitical impact of data should extend beyond the general sites of data to consider how the inequitable distribution of power aligns with the inequitable impositions of race and capitalism.

Gandy’s critique of statistics is warranted, given the role mathematics has played in the ordering of life. Laplace had already shown that early studies in probability theory by Pascal and Fermat

13. Kevin D. Haggerty and Richard V. Ericson.. “The Surveillant Assemblage.

14. See also: Solon Barocas. “Data Mining and the Discourse on Discrimination.” In *Proceedings of the Data Ethics Workshop*, 4, 2014.

could be used to demonstrate universal lines of reason.¹⁵ Although Pascal and Fermat were primarily interested in assessing probability through gambling risk, it was Laplace who first introduced the idea of statistical succession, or the notion that an underlying probability could be estimated with few direct observations. Interestingly, Laplace experimented with his proposition using the court of law. By applying the rule of succession to data collected from archived jury decisions, Laplace theorised that one could state, with a given amount of certainty, the likelihood a juror would assign innocence or guilt.

Laplace's model introduced elements of perceived certainty into an otherwise dynamic and contingent legal system. His model was one of pre-emption. It made use of mathematics to correlate seemingly disparate details of dynamic life. In the case of jury decision, the formula took into account historical data on various types of material evidences and their influences on individual juror perception. The rule of succession did not stand in for the law of the people, as was thought desirable, but for a new overriding law of nature that, as Laplace argued, was more robust than its more contingent human counterparts. Laplace believed that if one could only funnel the patterns of nature into symbolic form, then other behavioural phenomena, from the single jury decision to the regular movement of sun, could be

calculated and predicted with verifiable certainty. Laplace describes the extraordinary justification of this embrace as such:

Given for one instant an intelligence which could comprehend all the forces by which nature is animated and the respective situation of the beings who compose it—an intelligence sufficiently vast to submit these data to analysis—it would embrace in the same formula the movements of the greatest bodies of the universe and those of the lightest atom; for it, nothing would be uncertain and the future, as the past, would be present to its eyes.¹⁶

Laplace's attempt at regulating the dynamism of human decision-making might have been a failed scientific project, but he had succeeded in reinforcing a mode of thought; that the phenomenon of individual life, despite its seemingly erratic unfolding, was merely a derivative of a single, simple substance of nature. As result, the individual state of being was thought to materialise at the limits of scientific observation. It was furthermore subordinated to an existence, a law, above and beyond the specificities of each individual's life. Laplace's magic theory had great influence on later statistical theory in the management and organisation of variability. For instance, in Bayesian probability (which is a simple mathematical formula that reduces complex variables into symbolic representations of probable truths), variable

15. Ian Hacking, *The Taming of Chance. Ideas in Context*. Cambridge; New York: Cambridge University Press, 1990.

16. Marquis De Laplace, as quoted in Hacking, 12.

estimates can be adjusted on the basis of dynamic observational assumptions. This result is the further simplification of data into more manageable variables that are easier to calculate. Bayesian reasoning is an essential tool in machine learning and artificial intelligence research today, which operates in highly complex and contingent environments. It is an attractive tool for machine learning and AI researchers, since the techniques enhance computational speed while optimising algorithmic power.

Given Laplace's prior attempts to substantiate a new theory of probability theory from within the criminal justice system, it is no surprise that statistics has found its way into the contemporary racialised episteme of machine learning, the cousin of statistics. In machine learning and artificial intelligence, probabilities raise additional concerns about scale. Large scale applications can consist of hundreds or thousands of variable inputs, each holding their own margins of error. Stacking these errors risks the extension of probabilistic determinations beyond what is justifiable. Nonetheless, Abu-Mostafa, et. al. argue that a probabilistic view can produce satisfactory results without assumptions outside of those produced independent of the hypothesis.¹⁷ Advocates assert that, in many cases, experts are trained to intuit the forms of uncertainty present. They insist that as long as engineers use the same distributions consistently for each problem set in

each stage of learning, prior knowledges are unnecessary in the production of insight. They assert that debates on the subjective are mis-aligned with the aims of probabilistic learning, as probabilities are not expected to replicate target functions perfectly from their origin. Instead, they contend that probabilities are meant to approximate correlation in controlled environments, with an awareness that performance outside of the laboratory may vary.

To the contrary, critics assert that the fragility of these types of Humean hypotheses originate in the priority they place on scientific judgement. Humean inductive reasoning prioritises the number of observable instances in establishing a relationship with the production of knowledge. For Hume, scientific judgement is based on the probability of observable outcome: the more instances, the more probable the predicted conclusion.

Michael Wood has written that without a more complete understanding of the role of the subjective within the determination of probabilities, they remain assessments of ignorance and judgement. Wood states: "if, for practical reasons, samples are not selected randomly, the question then arises of whether they can reasonably be regarded as if they were selected randomly. This is a matter of judgement."¹⁸ The matter of judgement is what Gandy sees as the fundamental determinant of subject position. "How we evaluate people, places and

17. Yaser S. Abu-Mostafa, , Malik Magdon-Ismael, and Hsuan-Tien Lin. *Learning from Data: A Short Course*. S.I.: AMLbook.com, 2012.

18. Michael Wood. *Making Sense of Statistics: A Non-Mathematical Approach*. Nachdr. Palgrave Study Guides. Basingstoke: Palgrave, 2004.

things in terms of their departure from what we have defined as the norm,” Gandy states, “is often a fundamental determinant of the position they will come to occupy in still other distributions that we have yet to consider.”¹⁹

It is worth it at this juncture to return to the wider logic of enumeration that have informed these processes, what Wynter describes as the *eugenic descent*, or the operational decline imposed by the colonial episteme. Wynter’s adoption of this point of reference extends the artificiality of regulated attributes into the substances of class, sexual orientation and race. Her claim is sustained by the creation of what she describes as eugenic/dysgenic selection.²⁰ The coherence of racialised attributes, in this sense, what I call the fictive substance of race, links the dynamic instrumentalisation of coherence found in the bioepistemic to the “discursive negation of co-humanness.” In this way, I draw closer to validating Fanon’s claim that colonial perception is a discursive practice that is self maintaining in its capacity to empirically self-justify.

He also stipulates that the apparatuses of empiricism, such as the assembly line and the discretisation of time, are appropriated to enact the management and organisation of space. These apparatuses speak to the materialisation of certain components and process. They are not, however, a suffi-

cient account of the logics that enable the operation of empirical apparatuses. I argue that the empirical objects and processes that Wynter and Fanon describe are underwritten by the accumulation, management and classification of data derived from the system of observation. This is an important claim since Wynter and Fanon are less explicit about the origin of empirically-enabled data.

I posit that these violences are crucial components, even unwittingly, in the operation of artificial intelligence and machine learning. My goal—given the roles of bioepistemic epidermalization (Wynter/Fanon/Browne) and white prototypicality (Gordon) in organising space and time—is to understand what capacities machine learning and AI then have to reinforce or reinstate the colonial imaginary. This is important since, as Adrian Mackenzie argues, “Machine learners today circulate into domains that lie afield of the eugenic and psychology laboratories, industrial research institutes, or specialised engineering settings in which they first took shape.”²¹ In this way, our contemporary encounters with data extend well beyond notions of design, ease of use, personal suggestion, surveillance or privacy. They take on new meaning if we consider the underlying principles of mathematics as the engine that drives data towards languages of normality and truth prior to any operational discomforts or violences.

19. Oscar H. Gandy. *Coming to Terms with Chance: Engaging Rational Discrimination and Cumulative Disadvantage*. London: Routledge, 2016, 4.

20. Sylvia Wynter. “The ceremony Found: towards the autopoietic turn/overturn, its autonomy of Human agency and extraterritoriality of (self-)cognition.”

21. Adrian Mackenzie. *Machine Learners: Archaeology of a Data Practice*. Cambridge, MA: The MIT Press, 2017, 6.

So what are we to do in our current empirical reality, or I could say data-informed lives? How are we to disrupt the distributions of power that are amplified by data and advanced learning systems? It is here that I think through the object—the black object as the technical object—as a site of affirmative potential or a kinetic dissonance and dynamic incoherence at the very basis of being. If we are to consider the photogenic object in contemporary spaces of algorithmic culture, it is apparent that the black technical object is always-already pre-conditioned by an affective prelogic of race that functions on the level of the psyche.²² The possibility of an affirmative engagement between the black technical object and the algorithm, as a technical object, is then limited by the necessity to reconcile the psychic potential of the racialised individual with that of a pre-determined technical structure. Although the immediacy of computation's lack of diversity—in terms of institutional value and algorithmic function—cannot be understated, a call to make black technical objects compatible to machine learning and artificial intelligence algorithms risks the further reduction of the lived potentiality of black life. As I have argued, the consequences for the black technical object are immense.

It must be asked if the black technical object can be conceptualised as outside of the dialectic between human and machine? Is there such a thing,

borrowing from Fred Moten, as an aspirational black life that can gain a right of refusal to representation? As such, would a universal computational gaze limit the self-determination of those that have little or no desire for inclusion in machine perception? Without a wider scope, debates on these matters remain incomplete in their characterization of algorithmic prejudices and social discriminations. Attempts at reconciling this arguably unsettled debate rely on a commitment to sufficiently characterise the constitution of a more affirmative process of machinic existence that can gain a totality in relation to artificial modes of perception. The proposal asks us to consider what is overlooked in machine learning and AI research, and instead consider it as already an act of colonial thought. In doing so, my hope is to dislodge both the ontological and functional processes of machine learning and AI from their roots in substantialist metaphysics and Aristotelian modes of truth. Machine learning and AI here necessitate a new reflexive position that can generate alternative levels of operation.

A revision of this field demands a return to the system of relation from the perspective of a multivalent—non white centred—mode of reality. I draw on Gilbert Simondon's concept of *psychic and collective individuation* to argue that the reconciliation of black being—the black technical object, as such, does not deny historical negation, but can, through this duress generate new forms of being and become-

22. Ramon Amaro.. 'As If,' e-flux architecture, 97, accessed April 26, 2019, www.e-flux.com/architecture/becoming-digital/248073/as-if/.

ing. Simondon argues that “psychic and collective individuation incessantly and persistently creates being as it advances, maintaining in each created or individuated scope of being.”²³ I locate my argument here to suggest that although *difference* brings forth a consistency of relations between objects (be they human, technological, or structural), these relations are not pre-determinate. To the contrary, *difference* presupposes the material presence of contradiction and incompatibility. Here, we can imagine a technical object—a black technical object—that develops an indifference to description or any other form of artificial representation. It would maintain—as has been illustrated in the black abstract painting of Jack Whitten, a radical diversion from the prototypical figure to confront and dismantle the hard structures of Truth.

Here, if symbolism is enacted, it is not in the service of mathematics, but in the abstraction of black life. As Whitten states in his 1970s painting ‘Homage to Malcolm X’, it would have to be something that would enact “that feeling of going deep down into something and in doing that I was able to capture the essence of what” —these are my words now, blackness is all about. Black being, as such, actualises as an experience that is lived from both within and in excess of artificial modes of perception and the fictive imaginaries of race. The act of transformation here challenges the state of homo-

geneity and the perceived stability of categories to instead engage in a transformative politics of affirmative self belonging—what bell hooks might call a ‘communion’, where the entropic individual exceeds the barriers of social relations to enter an alternative space of becoming—made possible by a reimagining of the self. In other words, the unusable, uncommon, and thus incomputable individual potentialises the social space toward new ways of relating and relation. As journalist Alex Greenberger writes of Whitten’s work:

Whitten utilized an unconventional process for which he would lay the canvas on the floor, drag a squeegee across to mix his color, and then let the paint dry. Paint was piled on as much as a quarter-inch thick in many of them, and all of the tones Whitten chose were left visible. With their warped, colorful forms and their unclear geometries, they resemble long-exposure photographs of things in motion... Whitten relinquished some control over his canvases, leaving the final results to chance in some respects. To test the ways that time and tools affected the painting process became Whitten’s mandate.

What if we were to take Whitten’s mandate at face value as we confront the duress of the machine—in much of the same way that Whitten addressed the suffocating atmosphere of race and racism in the 1960s? What if machine learning were less ‘gestural’

23. David Scott. *Gilbert Simondon’s Psychic and Collective Individuation: A Critical Introduction and Guide*. Edinburgh: Edinburgh University Press, 2014, 77.

forms of abstraction, using Whitten's words, but closer to what he has called 'conceptual painting'—where there is no destination towards the reinstatement of a pre-existent human category, but a journey towards the conditions by which something new can emerge.

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PROFIT AND PROPHECY
CALLUM COPLEY

In this text I wish to highlight the interconnectedness of fictionality, futurity and finance whilst specifically addressing the utilization of speculative futures as a value-creating mechanism within the global economy. Through a process of financialization, the global economy increasingly incorporates futurity at every level; a futurity which is by definition speculative and therefore fictional. Owing in part to their shared histories, I hope to show the extents to which some financial products share key characteristics with literary fiction. Most crucially, that they generate a reality of their own by making assertions that exceed a simple reporting of empirical facts. Through the analysis of ‘catastrophe bonds’ and other financial fictions, I will illustrate the ways in which individuals and companies stake a claim on a future by trading risk as a commodity in order to generate a profit in the present.

A fundamental characteristic of the free market is its uncertainty, the precondition for speculation and thus the source of a considerable amount of profit. Not surprisingly, this attribute has been nurtured, and over the twentieth century the global economy has undergone a general process of ‘Financialization’. Financialization itself represents the increasing domination of “fictitious capital” within the global economy, an autonomous production of money primarily managed by banks and not tied to any physical production of goods or services. As Max Haiven describes it, “Incarnated in debts, shares, and a

diverse array of financial products whose weight in our economies has considerably increased, this fictitious capital represents claims over wealth that is yet to be produced. Its expansion implies a growing pre-emption of future production.”¹ This ‘wealth-that-is-yet-to-be’, although situated in the future, is drawn in into the present, via the price of stocks or bonds; which represent a claim on the future surplus value yet to be extracted from labour (of which there is no ultimate guarantee). To give an example, a share in the arms manufacturer BAE Systems ostensibly represents a given fraction of their fixed capital and their capacity for producing profitable weapons. However, the price that this share is bought and sold for on the London Stock Exchange tends to rely most heavily on how profitable potential investors *speculate* the future of BAE Systems to be. Fictitious capital highlights a dynamic whereby the quest for continuously greater shareholder earnings precipitates fictitious profits via the propagation of financial instruments—instruments evermore nebulous in the face of increasingly deregulated and convoluted systems. Financialization therefore manifests itself in unprecedentedly chaotic markets, as well as in a growth of the indebtedness of firms, households and states.²

As it stands, the financial sector is so pervasive that it is intrinsic to the economy at large, particularly because most major production industries now rely

1. Haiven, Max. *Cultures of Financialization: Fictitious Capital in Popular Culture and Everyday Life*. Basingstoke: Palgrave Macmillan, 2014.
2. Durand, Cédric. *Fictitious Capital: How Finance Is Appropriating Our Future*. London: Verso, 2017.

heavily on credit mechanisms to operate. The functioning of Apple as a corporation, for example, pertains as much to the conditions of readily available consumer credit (fundamental for their customer to have the means of purchasing their products) as to the physical production of iPhones. Finance is then “consubstantial with the very production of goods and services”³ and fictitious capital entwined into every stage of the production process. As such, futurity itself is thus folded into the very present, incorporated at each of these locales. This increasing primacy of finance (and therefore the very notion of a speculative future) begins to transform the economy into something ever more fictional in its constitution.

The extent to which Financialization’s pervasiveness might best be depicted is in the fact that immediately prior to the 2008 crash, the total value of privately traded derivatives contracts circulating was over six times that of the total GDP for the entire planet that same year.⁴ In spite of the subsequent global recession, financialization has continued to be a dominant narrative of the present and therefore that of the future. As Max Haiven notes, this happens to the extent that fictitious capital “shapes the imaginations of all varieties of social actors in ways that fundamentally orient their reproduction, largely towards its own reproduction.”⁵ Financialization rep-

resents then, the adoption of fictitious capital as the hegemonic means of explaining and imagining society around which reality itself forms. Such fictionality is at the heart of financialization, since it deals with futures which are necessarily only ever imagined.

Writing on the development of the novel, Lennard Davis argues that it was borne out of what he calls the ‘news-novel matrix’, at a time when the distinction between forms of literature such as journalism, satire and political scandal was highly ambiguous.⁶ Looking closer at the relationship between financial capitalism and fiction, Catherine Gallagher’s research elucidates their shared histories. Whilst developing in tandem and in contradistinction to one and other, she notes that the level of ‘imaginative play’ required by the reader in the enjoyment of a novel uses the same conceptual faculties as needed in the comprehension financial capitalism. She suggest then that the understanding of early forms of financial capitalism, such as insurers calculating risks or investors extending credit, was enabled in part by the acceptance of fictionality facilitated by fiction as a literary form. She writes, “The suspension of literal truth claims helped even common people to accept paper money: too wise to believe that the treasury held enough specie to cover all of their paper at once, they instead understood that the credit they advanced collectively obviated the need to hoard precious metals privately. So the government, too,

3. Marazzi, Christian. *The Violence of Financial Capitalism*. Los Angeles, CA: Semiotext(e), 2011.

4. Foster, John Bellamy., and Fred Magdoff. *The Great Financial Crisis: Causes and Consequences*. New York: Monthly Review Press, 2009.

5. Haiven, Max. *Cultures of Financialization: Fictitious Capital in Popular Culture and Everyday Life*. Basingstoke: Palgrave Macmillan, 2014.

6. Davis, Lennard J. *Factual Fictions: The Origins of the English Novel*. Philadelphia: University of Pennsylvania Press, 1997.

relied on the imaginative sophistication of its people and financed a vast military and imperial enterprise by selling national debt bonds.” Boldly, Gallagher claims that most if not all of the developments associated with modernity (from scientific progress to greater religious tolerance), required the kind of universal ‘cognitive provisionality’ one practices in reading fiction.⁷ Certainly, at a time when economics was so closely tied to the physical production of goods, new schemas of understanding the *real* and the *fictitious* would have had an impact on the changes to come with regards to early forms of financialization.

Such analysis might go some way to explain today’s affinity of the free market toward trading unsubstantiated claims to wealth in the face of numerous subsequent crises. Literary fiction has perhaps prepared us with a ‘cognitive provisionality’ that allows for the engagement with, and acceptance of fictitious capital. It is not to suggest that this responsibility lies with the genre, but rather to understand that this link with the fictive has enabled a stronger relationship to fictitious capital to grow.

“Not only does capital move through risk. Risk itself is a commodity,” writes John Foster and Fred Magdoff. It is, they continue, “sold via insurance as a means to hedge against the future when one’s life depends upon it, turning life into something one invests in through anticipatory logics.”⁸ In an extensively finan-

cialized economy, markets become not only increasingly precarious entities themselves but also incorporate risk itself at the level of tradable assets.

According to the World Economic Forum’s 2019 Global Risk Report, environment-related risks account for three of the top five risks by likelihood and four by impact.⁹ As the planet sees an increase in the frequency and intensity of extreme weather events, we find an inevitable rise of new financial instruments which attempt to utilize the situation for profit. Catastrophe Bonds (cat Bonds) are one such instrument. These ‘Insurance-linked Securities’ (ILS) are broadly defined as those whose values are driven by insurance property ‘loss events’ arising from natural catastrophes such as hurricanes, earthquakes, and pandemics and usually issued by a city, state or organization. They were created during the mid-1990’s, in the aftermath of Hurricane Andrew, when insurers operating in Florida began to realize that increasingly destructive catastrophes could incur a scale of damage that even reinsurers—those who insure the insurance companies—might be unable to cover. Where traditionally these ‘force majeure’ were seen as uninsurable, they now have their own market. As historian of science Professor Lorraine Daston states, “The new natural disaster models claim, the ideal of an insurable event is one that is totally aleatory, as random as the roll of the dice.”¹⁰

7. Gallagher, Catherine, “The Rise of Fictionality,” in *The Novel*, ed. Moretti, Franco. (Princeton: Princeton University Press, 2006)

8. Adams, Vincanne & Murphy, Michelle & Clarke, Adele. *Anticipation: Technoscience, Life, Affect, Temporality. Subjectivity*, 2009. .28. 246-265. 10.1057/sub.2009.18.

9. *The Global Risks Report 2019, 14th Edition*. Geneva: World Economic Forum, 2019.

10. Daston, Lorraine. “Natures Revenge: A History of Risk, Responsibility and Reasonableness”. University of Oxford. Oxford, January 2013.

When a 'sponsor', such as an insurance company (or in many cases governments and private companies) decides to transfer all or part of the risk assumed in insuring a catastrophe, it constructs a special purpose vehicle (SPV)—a separate legal structure based offshore which is in essence a new company. This SPV then issues cat bonds, typically investing the proceeds in low-risk securities, the earnings of which, alongside the insurance premiums paid to the sponsor, are the source of periodic interest payments its investors known as 'Coupons'.¹¹

Cat bonds, like all financial assets are tradable and available for exchange on the market. While in one instance they generate profit for those who hold them, these commitments themselves can be bought and sold as small fractions of a future. The market price of any cat bond therefore amounts to the value of expected future interest and principal payments.

Each cat bond describes in detail the specifics of the natural disaster to which it pertains, including location, damage extent. In addition, they stipulate the maturity period, (typically three years) in which this event must occur for the sponsor to be reimbursed for damages. During these three years a suspended reality is created, in which the imminence of a scripted disaster is hovering at the edges of existence. Depending on the particular type of risk, the specifics of the incident would be stipulated within the bond, such as the exact magnitude of an

11. Murphy, Chris B. James Chen. "Comparing the Risks and Benefits of Catastrophe Bonds." Investopedia. April 25, 2019. Accessed April 25, 2019. www.investopedia.com/terms/c/catastrophebond.asp.

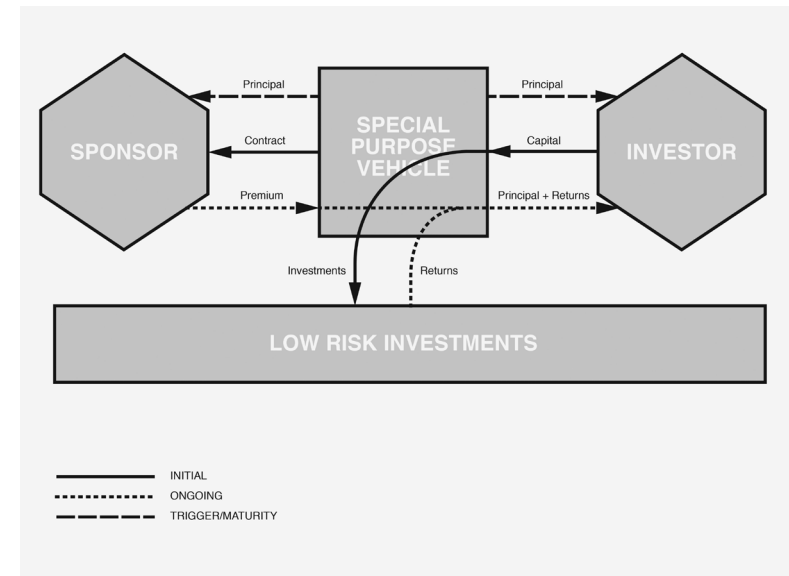


Diagram illustrating the typical structure of 'Special Purpose Vehicles'

earthquake or the wind speed of a hurricane. These conditions are known as 'the trigger'.

Whilst the individual insurance policies taken out by customers of insurance companies might offer compensation for a range of incidents, the cat bond instrument which reimburses the insurance company is only activated if an incident reaches specific level of severity. As a result, contain an explicit narrativization which imbues cat bonds with sense of risk which feels far more palpable.

I would then suggest that cat bonds therefore can also be seen to represent a distinctly literary object within an already fiction-orientated insurance industry.

Further highlighting the connections between financial speculation and fiction, Tamara S. Wagner writes on the deeply ambiguous stance towards financial speculation taken by Victorian novelists. In her research, she points to the myriad of interchanges between literary productions and the credit economy's new instruments. "Financial narratives", she says "became characterized by a self-reflexivity that built on a fascination with cultural myths, or fictions, of various, at times peculiarly identified, "papers." In an ongoing restructuring of plotlines and metaphorical constructions, these papers were seen to stretch from banknotes and stockmarket shares to popular fiction itself."¹² In the milieu of the time, the distinction between newly emerging financial docu-

ments and literary fiction was extremely blurry and equally unclear for the average citizen.

This complex relationship I would suggest, still endures. Similarly to literary fiction, the salable narratives of cat bonds propose a reality wherein the author and the readers accept a level of fictitious construction and yet, act to some extent as if the described reality were true. The imaginary is transferred from something existing purely in the mind, into a form of reality through its concrete narration. In contrast to something like a business plan, for example, which insists on a specific chain of fortuitous events or a project's future profits, the cat bond's narrative instead, rather cynically, depicts the occurrence of a singular event against which an investor wagers. Could the cat bond represent a contemporary instantiation of one of these Victorian 'papers'—a financial narrative of ambiguous fictionality?

Similar to the swelling uncertainty of the markets engendered by unbridled financialization, cat bonds operate within and capitalise on, the growing volatility of earth's weather systems. It is irrelevant to investors whether, in the coming decades the planet see increasing drought or increasing rainfall. Instead, it is merely the increasing unpredictability of the weather itself that is the source of profit.

In the rare case that the triggering event occurs, holders of cat bonds (the investors) would expect to lose most or all of their principal and unpaid interest payments. Complex computer models based on historical insurance patterns consult real-time sci-

12. Wagner, Tamara S. *Financial Speculation in Victorian Fiction Plotting Money and the Novel Genre, 1815-1901*. Columbus: Ohio State University Press, 2010.

entific measurements after the 'impact' to assess if the bond should be activated. These systems are charged with deciding if the hurricane was quick enough or the earthquake strong enough. Although these precise conditions are clearly laid out in the documentation beforehand, the legitimisation of whether a triggering event *actually* occurred or the conditions under which the event happened, can be enigmatic and often ends in litigation.¹³

To give an instance, following 9/11 there were lawsuits filed centered around questions of whether the destruction of World Trade Centers in New York constituted a single or multiple attacks. In an already thick matrix of contingency, such ontological ambiguity can add further uncertainty to the way that ILS perform. Before such an event actualises, it is first fictionalized by actuaries within the bounds of the bond's offering documents. Then, in the wake of the incident, reality is contested and what actually occurred is scrutinized in an effort to evade payout. We might say then, that in these cases, the future has undergone a double fictionalization whilst leaving behind a reality all too real for those affected by the disaster.

The global centre of the cat bond industry is currently the Bermuda Stock Exchange where \$19bn worth are listed. As well as being far less stringent on capital requirements and disclosure of financial positions, Bermuda is one of the only places where

13. Financial Industry Regulatory Authority. "Catastrophe Bonds and Other Event-Linked Securities." *FINRA.org*. October 29, 2013. Accessed April 25, 2019. www.finra.org/investors/alerts/catastrophe-bonds-and-other-event-linked-securities.

post-transaction notification is permitted for ILS trading, meaning that any regulation would happen after the fact. In contrast, The City of London, its closest rival, requires ten days to approve each new SPV beforehand, making it a far less efficient exchange. "Speed to market is critically important for this industry" claims Greg Wojciechowski, chief executive of the Bermuda Stock Exchange, "Financial markets get totally unnerved by uncertainty. It can be a deal killer," he continues.¹⁴ Here we see the paradoxical relationship between 'uncertainty' and the markets vocalised. Everything up to but excluding the act of trading must remain as unpredictable as possible, to permit rampant speculation, but the single certainty must be that the trader may buy or sell unhindered at their whim. The privileged position of the trader then, is that they are granted absolute certainty in their managing of all other uncertainties for profit.

As of 2016, Public Pension Funds (PPFs) held around \$5.9 trillion in total assets globally and over 4% of all publicly traded assets.¹⁵ An increasingly substantial proportion of these investments have been in cat bonds and other ILS investments, doubling between 2016 and 2017. However, as early as 2013, The European Insurance and Occupational Pensions Authority raised their concerns in a report, that the "inflows of new capital into ILS, such as catastrophe bonds, originate mostly from fixed-in-

14. Ralph, Oliver. "London Outrun by Bermuda on Catastrophe Bonds." *Financial Times*. December 14, 2016. Accessed April 25, 2019. www.ft.com/content/ec4d7438-c07d-11e6-9bca-2b93a6856354.

15. Hentov, Elliot, Alexander Petrov, and Sejal Odedra. *How Do Public Pension Funds Invest? From Local to Global Assets*. Boston: State Street Corporation, 2018.

come investors, such as pension funds who are searching for yield, but not necessarily having the modelling capabilities and experience to fully analyse the underlying risks and complexity of the insurance market.”¹⁶ The result of such a trend has been described as a potential systemic risk to the markets themselves.¹⁷

Through PPF investment in cat bonds, risk-as-commodity is exported from increasing disaster prone regions of the world, along with a hefty profit margin, to centres of wealth in Europe and U.S. This risk is spread amongst the individual workers paying into their pension funds, becoming unknowingly dependent on the uncertain futures of others for the security of their own. What is interesting to note is the contingent geographic relationship between investor and issuer. For example, the pension fund of a Japanese-based company might steer clear of cat bonds pertaining to local disasters. This is because should there be such an event in that part of the world, its sponsoring company would suffer not only from the impact of the weather but also from the loss of its investment.¹⁸ A cat bond then only becomes a profitable investment if the zone of destruction is separate from that of the investor.

16. European Insurance and Occupational Pensions Authority. *Financial Stability Report, Second Half-Year Report, Financial Stability Report Second Half-Year Report, Autumn 2013*. 2013.

17. Evans, Steven. "More Pension Funds Invest in ILS as Alternatives Allocations Rise: Mercer." *Artemis*.bm November 08, 2017. Accessed April 25, 2019. www.artemis.bm/news/more-pension-funds-invest-in-ils-as-alternatives-allocations-rise-mercer/

18. Moore, Charlotte. "Insurance-Linked Investments: Appetite for Catastrophe." *IPE*. April 01, 2013. Accessed April 25, 2019. www.ipe.com/analysis/insurance-linked-investments-appetite-for-catastrophe/50983.fullarticle.

In a twist of fate however, in June 2014, the World Bank issued the first catastrophe bond of its own, the Catastrophe Risk Insurance Facility (CCRIF), the signatories of which were a group of sixteen Caribbean countries.¹⁹ Amongst this syndicate, the unregulated tax haven of Bermuda was included. In this case however, rather than the Bermudan Stock Exchange facilitating such a transaction for profit, the nation itself exercised caution and foresight in becoming a sponsor itself.

This relationship of distance stems from the fact that cat bonds are a non-productive zero-sum sector, therefore if someone wins, others have to lose. As PPFs pour increasingly large amounts of money into such zero-sum bets, some argue that this will likely to lead to a collective underpricing of the risk. This 'underpricing risk' describes the unanticipated possibility that large sums of capital could disappear as a result of a single disaster. These vast and unexpected losses by major investors could ripple outward through the wider economy, akin to the effects of the sub-prime mortgage crisis which was triggered by an unexpected decline in house prices, mortgage delinquencies and foreclosures.²⁰

In such a 'zero-sum' game, the two disparate futures of two different groups are bound together.

19. World Bank. "World Bank Issues Its First Ever Catastrophe Bond Linked to Natural Hazard Risks in Sixteen Caribbean Countries." World Bank. Accessed April 25, 2019. www.worldbank.org/en/news/press-release/2014/06/30/world-bank-issues-its-first-ever-catastrophe-bond-linked-to-natural-hazard-risks-in-sixteen-caribbean-countries.

20. Hitz, Luzi, James Greyson, and Bill McDavitt. "Cat Bonds: Cashing in on Catastrophe." *Road to Paris - ICSU*. June 05, 2015. Accessed April 25, 2019. www.roadtoparis.info/2014/11/18/cat-bonds-cashing-catastrophe/.

The immediate future of the inhabitants of a precarious location the more distant one of workers elsewhere. In both cases, each pay abeyance to their own anticipatory regime which attempts to ensure a stable future for the parties involved, and avoid approaching uncertainty.²¹ But this is by no means a symmetrical encounter; as it is those countries who have historically contributed least to CO2 emissions who are also the most vulnerable to climate change and thus pay in installments to protect against its worst effects. Meanwhile, the individuals and institutions of the world's largest polluters reap the profits of cat bond investment and trading.

One might ask if the flows of capital toward the abstracted entities of insurance bonds and away from those investments that might seek to materially halt or rewind the effects of climate change, could in fact be catalysing the disasters and increasing the (re) insurance market. Infact, for those who trade such bonds, it is most certainly not in their interest to prevent such events but rather, it is the very presence of these risks on which they profit. For such a danger to be eradicated would be constitutive with the removal of a source of profit underpinning the stability of their clients futures. Do these narratives and their financial representations—by their very existence—function causally to bring about their own reality, one in which cat bonds account for an ever increasing segment of the economy? Could investment not

instead be directed toward green energy, carbon capture and other sustainable technologies that would at once reduce the actual risk of catastrophic climate events whilst and at the same time provide a suitable return for PPFs?

Increasingly, imagined futures are utilized as a method for generating profits in the now. I hope to have shown that through a method of fictionalization, the unpredictability of the future has been commodified in the form of risk. Through a general process of financialization, the inherent uncertainty of financial markets has been exploited for profit, relying on imagined future wealth that is still to be generated. At the same time, the increasing volatility of the Earth's climate has, through a similar logic, been capitalized via the proliferation of catastrophe bonds, exploiting and commodifying the potentiality of destruction.

On June 7, 2017, the Catastrophe Risk Insurance Facility bond signed by the syndicate of Caribbean Island nations expired, when the narrative inscribed in contracts and legal documents became an unrealized future. The very existence of such financial narratives, regardless of whether the disasters actually come to pass “have already had their impact on our present lives.”²² For many, the arrival of a catastrophe is not a question of ‘if’ but ‘when’. Among them, there are those who can afford a policy

21. Adams, Vincanne & Murphy, Michelle & Clarke, Adele. *Anticipation: Technoscience, Life, Affect, Temporality. Subjectivity*, 2009. .28. 246-265. 10.1057/sub.2009.18.

22. Adams, Vincanne & Murphy, Michelle & Clarke, Adele. *Anticipation: Technoscience, Life, Affect, Temporality. Subjectivity*, 2009. .28. 246-265. 10.1057/sub.2009.18.

to provide compensation in the face of the inevitable and so make regular payments to secure their own future whilst subsidizing others’.

Whether at maturity they disappear, lost in the bermuda triangle or whether they erupt into the plane of being as a disaster, the narratives of cat bonds, like the increasingly fictionalized economy at large have real effects and should be understood to do so. While we navigate the speculative now, those of us who hope for a horizon beyond capitalism should pay attention not only to the swelling climate crisis, but the systemic dangers of integrating its risk into the global economy and incorporating futurity so thoroughly as to foreclose the potential of any truly livable future.

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SCHEMAS OF UNCERTAINTY

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WITCHES IN SPACE:
TRUE JOURNEY IS RETURN
JULIETTE LIZOTTE

The year is 2038 and the population of Earth has lowered dramatically. The ocean has risen and so has the Heat. Everything has been privatised. Humans live in gated communities led by corporations: Co-oRps. Most of the work has been automated but resources are scarce, so humans still need to be around to operate machines from time to time. Corporations work on settling in Space as it appears a more welcoming environment. Everyone is joining forces for this purpose. However, it's common knowledge that most will stay behind. There used to be riots and activism in response. It died out. People are exhausted. And at least the Co-oRps take care of them.

Your name is Saga and this is your story.

1

You woke up with the sunset this morning. January 15, it's already 45°C outside. You actually barely slept because of the heat. Today you are turning 18. Now you can finally get access to the cloud vault that your mothers left for you. You have been waiting for this moment your whole life.

You're rushing out of your shelter to be one of the first ones queuing at the door of the cyber-hall. When it finally opens you feel the humid warmth of the space wrapping you. Your impatience makes you notice the cacophony of digital sounds that come out of the multiple programs rebooting. The cyber-hall is only open each day until the resources are gone—there are a lot of people getting to their pods, so you

hope you'll have enough time. You get to a pod and login with your iris and your palm. The cloud vault has been locked for a very long time, but it finally opens up for you. There are many folders with strange titles and the whole interface feels frozen in time.

If you want to look into each folder and see what's in there, *jump to #2*.

If you want to search for your name hoping there's a file addressed to you, *jump to #3*.

2

Going through all the folders:

a lot of maps,
old video tutorials,
some photos of a bunch of ladies, including
your mothers soldering,
a drawing of a giant compass,
a million lists,
encrypted files.

Your neighbour at the nearby pod is making some obnoxious noises.

You feel confused by this mysterious legacy. You have almost no memories of your mothers, all you know is that they left you here at the edge of an ecological disaster—most likely destined to die.

If you want to call a friend that could help you with this mess, *jump to #4*.

If you want to search for your name hoping there's a file addressed to you, *jump to #3*.

You enter your name. But nothing shows up... This whole thing is such a disappointment.

If your mothers had something clear to say, surely they would have made a greater effort.

There are a lot of runes, esoteric drawings, pentagrams and other occult symbols here and there and some lists that look like recipes. However, some documents are very technical. It is hard to understand what could be the link between all of them. How are you supposed to draw the connections?

Perhaps the friend you made at the shelter might know how to make sense of all this disparate information. You ask your strange neighbour to keep your pod for a sec and go get your friend. *Jump to #4.*

There are more pressing issues in the world. *Jump to #40.*

After a while your friend Sia gains access to a hidden file and you discover a video message addressed to you.

The video features all of your seven mothers explaining that after years of ecofeminist activism and witchcraft on Earth, they decided to build three DIY spaceships to seek solutions to heal the Earth or to settle somewhere welcoming enough in outer space with the help of their coven. "If not witches with their infinite knowledge of stars and elements, who else could actually survive in space?" one of your mothers claims. After gathering all essentials—herbs, spells, seeds and much else— they had split up into

three groups to explore the galaxies. Their exploration was a quest for outside help to protect the multiplicity of species on Earth—or in case they would fail to do so, they hoped to find a viable habitat to settle in. They left 15 years ago today and according to their predictions you can find the location they should be at in the file 15yrslocation.pdf. In case they would not be back by the time you turn 18 or if they haven't given a clear sign that they were coming back they have gathered the necessary information for you to make a ship of your own in the last pages of the document. A note on the bottom of the page says it should take you about 5 years to prepare everything. You will probably have to update some components and rethink what to take with you; there are several new items that could be added to the essentials. They sounded very sorry they left you behind, but they reassured you of their excitement to meet you soon. The video finishes with a link popping up—it's a link to a pirate space archive where they would share their location and leave messages after their departure.

You and Sia are quite shocked and puzzled after watching it. It wasn't news to Sia that you have 7 mothers but it's the first time you encounter this link between ecofeminism and witchcraft. You have always seen some sort of magic being practiced around you, but you were never entirely sure whether this was really a thing or mostly a scam.

Following a quick research, you find some news reports from the early 2020s featuring your mothers as part of an activist coven. They state that

the coven “mysteriously disappeared” after setting fire to a large number of automated monoculture soya plantations in several locations around the world, putting an end to the mass production of soya for good.

If you think this situation is simply impossible, that your mothers are delusional—they abandoned you after all—that they may as well have been hiding this whole time or were probably killed. If you wonder how one can leave their child behind but still wish to put this behind you for good so you can focus on more pressing issues, *jump to #40*.

If you decide to follow the link to the ancient pirate space archive *continue to #5*.

5

You login.

10 messages.

Last message sent by mission 2, 10 years ago.

Something about crops and a new soil discovered: “this soil has great potential, it seems like the beetroots are starting to grow faster than expected. We will finally have an alternative to potatoes.”

You can’t believe it. By now you have heard of various people that had a wild impulse to escape to space and never came back. You start to think whether your mothers were lying about their intentions and they were just one of them. Most people who tried to reach space were found dead by officials at the space stations a few years later. Probably your

mothers are also dead. What a bunch of arrogant witches. You move on, *jump to #40*.

If you are getting incredibly excited, hopeful and worried at the same time; if you think they must have lost signal and you feel the need to find them, *continue to #6*.

6

Sia refers you to someone who can send messages into space.

You get there. Gloomy. Not very welcoming. Expensive.

If you decide to spend all the tokens you’ve earned last week for this *go to #7*.

If you decide to wait to find out more by looking into what was left for you in the cloud and maybe earn some extra tokens, *go to #8*.

7

A person called Mercury asks you for the coordinates of the last message.

You can now record a message to your mothers.

You haven’t really thought this through.

Mercury is pressing you.

You say: “Hey, it’s me, hm... I got your message. I don’t know if you will get mine but if you do, I’m gonna come for you I promise...”

Your time is up. Mercury smiles.

You are forced to stay at your shelter for a week until you get some more tokens to go to the cyber-hall again. *Move to #8*.

You spend innumerable hours at the cyber-hall watching, reading, putting together all the pieces of the puzzle. You feel powerful discovering this heritage. Each word, each piece of this precious knowledge gives you importance. But resources are scarce.

Some days you barely have any time. The cyber-hall blacks out and you are left to yourself. This gives you valuable time to prepare your first potions. You have to adapt them as most of the resources from 15 years ago have become very rare or extinct.

You cast your first spells. You understand the power of naming things, you start chanting incantations, you notice your effect on the world around you. You are glowing, pulsating an energy like no other: magnetic, fluid, endless.

If you want to continue this adventure all alone, *go to #9*.

If you feel like this energy has its limits and you need to share this experience with others, *go to #14*.

You can't afford to spend so much time at the cyber-hall.

You start taking notes and bring them back home with you to learn faster.

When everyone is asleep at the shelter you sneak into the canteen and prepare ointments and herbal oils from ingredients you found on the black market: lavender, oak leaves, thyme, mistletoe, rosemary, cold pressed olive oil, oregano, laurel, anise seeds, calendula... You test everything on yourself

first. Your tired teenage body is slowly getting more resistant to the thick polluted air and the overwhelming heat around you.

Breathing. Moving. Adapting.

You start using these skills to trade with others for equipment to build the spaceship. Healing people for some metal pieces. Casting spells for an old computer.

One night someone comes with a special demand: a curse for an old enemy. So far you have tried to make sure to only use your magic for what you deem 'a good cause'. The world is a mess and you don't want to make it worse. But this person has access to the last and most precious component you need in order to build your ship: a very advanced compass. You are not the only one to offer these kind of cursing services and if you refuse they will surely go to someone else.

If you decide to curse their enemy, *go to #10*.

If you refuse to harm someone else, *go to #11*.

You curse their enemy.

Hair loss and nail breaking for them!

Long days of physical discomfort follow this episode. Your body feels heavy.

Explosion!

The shelter was randomly bombed by a drone while you were out. Sia died. The compass is gone.

You decide to stop all this nonsense.

Go to #40.

11

After a long while you have finally gathered everything you need according to your mothers in order to assemble a space vessel for yourself.

You need to get out of the urban zone. You need to find an abandoned place far away where you can build this without being disturbed by anyone asking questions or robbing you.

You pack up your ointments, oils, herbs, your notebooks and all the pieces you scavenged.

If you decide to go North West *go to #12*.

If you decide to go South *go to #20*.

12

A very old woman at the outskirts of town.

Magnetic.

Her long white hair glows in the dark.

You look at her. She sees through you.

She tells you with no sound

"the time has come for all of us...

name your destiny and it will be yours.

what needs to be saved?

what needs to be remembered?

say hi to the stars for us

align with your planets

the journey is just starting

and true journey is return."

You walk away, hypnotised.

Go to #13.

13

The old woman's mantra has put you in a trance.

It takes you seven days to assemble the ship.

You eat very little and sleep for a whole day before launching.

Athena—the smart home system you hacked to be your assistant in the ship—helps you activate all the parameters to launch properly. Thank you Athena. Speed. Dizzy. Black out.

You wake up floating above your seat. The ship is stabilized. You ask Athena for depressurisation. Deep breath. You see the Earth from far out. You've seen this image so many times on a screen.

You get to the cryo-nap-tub you built. You prepare a mix of oils and pour it in the icy liquid. You invoke the essence of all earthly beings twelve times. You wait to see the moon through the small window. It's a full moon. You enter the itinerary to Athena. You will be awoken in twelve months. "Moon, protect my travels," you say. You chant as you sink into the tub. *Go to #18*.

14

Your mothers have always achieved their missions as part of a coven.

You need allies if you want to achieve something. Real power comes from uniting forces!

You reach out to your shelter friend, Sia. After all, she knows most of the story already and you grew up together.

Go to #15 to recruit more people.

You gather a bunch of what some people call “outcasts” like you—orphans, sex workers, hackers—hoping for something to believe in, a community to care for. Everyone is so self-involved, trying to survive no matter what is happening around them. The tokens your Co-oRp allows you every week are not enough to survive on. At least not for the majority of humans left that require them. Every Co-oRp just enables the remaining one percent to have a better life.

You teach your new allies your recent discoveries. Most of them were already practicing witchcraft one way or another, sometimes without even knowing how to name it. You get amazed by the power that your group is generating, while each of you generates their own distinct energies.

Together you recite all the flora and fauna of the world, the species that disappeared long ago, hoping to reanimate them through your memory, hoping that they will carry the memories of all the beings for which you don't know the name of or can't be named. You perform rituals and follow all the spirals and cycles of life. You've never felt such a sense of community.

Forget about space! You decide to stay here with your beloved community! *Go to #40.*

Don't forget your purpose! You open up to your coven about your mothers' space mission and your intention to rescue them. *Go to #16.*

Your coven support your quest and join forces to gather all the pieces you need. You discover unknown underground channels to trade forgotten tools. Taking turns at the cyber-hall, healing people for components, selling potions at the black market... You have found new ways of sustaining outside of the failing system of the Co-oRp. Your coven is with you and you feel unbeatable.

One night, after having gathered everything the group needs, you discuss the mission.

Your coven won't leave you to go out there on your own: “We need each other!”

You don't want to put them in danger. You want to convince them to stay and continue the good work you've all been doing here and go to space on your own. Be patient, they will understand. You leave towards North West alone. *Go to #12.*

You agree with them! But you also agree that some should stay and share the knowledge to other people down here: remember names, remember recipes, find life anywhere and rescue it. Seven of you will go. Six will stay. *Go to #17.*

You suggest to find a space outside of the gated community of the Co-oRp to build the ship. It's time to say goodbye to your six allies. You perform a ritual of protection. Everyone hugs and kisses. No tears. You

promise to come back. Sia promises to spread the precious knowledge you've gathered together.

The walk to the outside of the gates was not physically challenging at all, but you know you will not be able to get in again. It takes you 3 days to build the ship.

Sia really did a great job in reprogramming Athena—the virtual assistant you've found.

It's new moon tonight. Time for one last ritual before launching.

Frigs.

Odine.

Metis.

Tyr.

Anan.

Orun.

And you.

"We protect the spacecraft and clear the way for a safe journey."

Athena's voice is resonating in the small vehicle. "Prepare for Launching. 4,3,2,1," they utter.

Infinite noise. Speed. Passing out.

You wake up gently carried by Orun. Everyone is awake. Tyr is preparing 5 baths for cryogenisation. Metis and Anan will stay awake to make sure the journey goes well.

Together you invoke the spirits of the forgotten celestial beings in a long chant that brings you calmness. The five of you drink an herbal potion before undressing and sinking your bodies into the lukewarm, slimy bath. You feel your body relaxing

softly, your mind resists for a short while until the potion kicks in and you fall in a deep sleep.

Go to #21.

18

You wake up twelve months later, realising you are not at the geographical position you intended to be. Something must have gone wrong. You log into Athena's journal.

A month ago, the ship had received a signal indicating the presence of a group of people on a small planet. Athena decided to follow that signal instead. You are only a few days away from this location. You can see more of that small planet hour by hour. A green moon. Glowing like a firefly.

You sleep long that night. The next morning you wake up from an incoming message emitted from the planet. "We have detected your approach. Please declare your identity and provenance." You recognise this voice. You run to the control board and record back "Mothers, It's me, Saga!"

You land a couple of days later. More excited than ever.

You find there three of your mothers.

Together you realise that time passes very differently on this planet. To them it seems as if they have just arrived but to you they have been here for years. In their time here, they have been studying the soil. They have been testing the possibility of planting seeds from Earth as well as from a couple of other planets they have visited. Their research is still very

much at its early stage though. They have never heard from mission 2 and they lost contact with mission 3 probably five or six years ago.

You tell them about the way things are on Earth:

Lack of resistance

People's exhaustion

Hopelessness.

The big plan of Space colonisation from the Upper Class.

Earth becoming a prison for non-privileged species to go extinct.

You convince them to get back to Earth.

You ask to listen to the last message from mission 3 that was received years ago. It is very old and their position very far.

One of your mothers insists to rescue mission 3. Her lover is a part of it.

If you see the importance of helping mission 3, *go to #19*.

You think everyone on mission 3 is probably dead, if they weren't they would have tried to establish contact. If you think finding mission 3 is not a viable option, *go to #30*.

19

Athena guides you to the last coordinates of mission 3.

Getting closer you feel a mysterious magnetic force pulling you forward. So strong. Impossible to resist. Athena's sirens resonate through the whole ship.

You feel your entire body torn apart.

You all die.

Your bodies are turned into particles that will feed the stars.

20

As you walk South, you meet Sia your old friend from the shelter. She convinces you to stay longer and to share your knowledge with some people here. Sharing knowledges between people is more than needed at this time than ever. *Go to #15*

21

You wake up to the gentle touch of Metis. You have slept for eight months. You all share a delicious meal together and you hear about Anan and Metis' days in Space. You have almost arrived at the location where the last message of mission 2 was registered.

Once you get there: *N o t h i n g .*

As a group, you decide to go towards what seems to be a planet just a few weeks away. Along the way you experience intense disturbances. Athena crashes. The whole ship is out of power. You stay afloat for three days meandering without knowing where you are. Worried. At least you have each other.

A dim glow, emanating from the planet you're going towards, brings comfort to all of you. On the 7th day of blackout everything turns on again. You receive a weak signal from the planet. But it's impossible to announce your arrival.

You land half-a-day hike away from the signal. Three of you hike to its origin. Exhausting.

The air is so pure. It cuddles your lungs. You have never breathed better.

You arrive from a hilltop and from there you recognise four of your mothers gardening. They look very similar to what you remember of them. They also look strangely similar to each other, more than what you remember—it is as if they have turned into each other.

They see you and look scared at first. You scream out their names and then your own name. They run to you.

You update them about all that has happened on Earth. They tell you about their settlement here. The clean air. The fertile soil. The absence of any beings in the last 15 years. When being here, your cells adapt to what is around. You are the soil and the air. You are each other.

You tell them of your promise to go back to Earth. They also want to go back, they just lost track of time. A few years ago they received a signal from mission 3, but they never received anything from mission 1.

If you want to try and find mission 3, *go to #19*.

If you think finding mission 3 is not a viable option, *go to #30*.

30

Mother:

“We are not colonisers.

As much as the discoveries of other species and beings is exciting

The answer is not out there.

And if we would find it, it will only open the way for Space colonisation to exploit it.

We are not displacers.

We are protectors. Healers. Messengers.

We need to face our destiny and help our kins.

Who knows how Earth will look like when we come back? There is no more time to waste.”

“True journey is return.”

40

You are 52 and you have spent most of your life healing people. You are not a doctor—these are for the Upper Class and most of them are on the satellites around Earth, planning further space colonisation. You call yourself a witch. You used your mothers’ archives to develop your own practice of healing and you kept adapting the recipes of potions, ointments and remedies, according to the species available as others are becoming extinct.

This practice has been very rewarding but also very difficult.

People are dying around you.

Heat waves. Snow storms. Risen waters.

You have been nomadic for the last 20 years, in response to climate change’s evolution.

After two weeks of hiking along old roads in a place that must have been Norway in the old times, you can get some rest in an old administration building for the night.

There is electricity for once, they must have been using solar panels and the generator hasn't exploded yet.

You find an old pod. This once familiar object seems so alien now.

Your palm against the pad. A long while passes and a deep and familiar sound indicates the program launching.

Your old cloud vault appears.

You haven't had the chance to log in for so long. You take the opportunity to search through your files for more information about some of the flora and fauna of Northern Europe, updating your notebooks for some future use.

An old folder catches your eye, one you hadn't had the heart to delete when you were younger.

If you decide to spend the night exploring this folder, *jump to #41*.

If you fall asleep exhausted by the road trip, *continue to #42*.

41

You wake up sweating. A very annoying sound is on repeat. A video of your 7 mothers plays on the screen in front of you. It's stuck and it's impossible to understand what they are trying to say. The file must be damaged after all these years. It's actually a mystery that these servers are still on somewhere...

You notice one of your mothers holding a board with a strange association of letters and numbers that could be an external link.

It's time to go. Your road companions are pressing you. If you waste time you'll be caught by the heat. If you decide to go and copy these files on a drive hoping to be able to consult them later, *jump to #46*.

If you convince your road companions to settle in the office building for a few days and decide to look up this mysterious link, *jump to #42*.

42

The link brings you to a pirate platform. A very weak signal has been received a couple of weeks ago. You hear one of your mothers' speaking about a planet full of pure air, a very fertile soil and an energy that no one could imagine. Nothing else.

You cry.

How is this possible?

How old would they be by now?

Go to #43.

43

You have been scavenging along the way up North—as North as possible.

Your drive to go out there has helped you become a very powerful witch.

You left your road companions several days ago to settle in an old foraging facility at the border of a forest.

There you perform a ritual to finalise the vessel. Make it safe. You ingest a psychedelic potion to liberate yourself before the journey and to gather your energy.

A vision.

If you see a hen, *go to #44*.

If you see a wolf, *go to #45*.

If you see a goat, *go to #48*.

44

The hen dances around you.

Joyfully she says:

“Don’t go without me.

I’m fertile and I’m loyal.

True journey is return”

Go to #47.

45

The wolf is majestic.

They talk to you and their voice sounds like your voice.

They talk to you and their voice sounds like your mothers’ voices.

“You are not a coloniser.

You are not a displacer.

The answer is not out there.

You are a protector. A Healer. A Messenger.

You need to face our destiny and help our kins.”

You decide to stay.

Go to #46.

46

You haven’t had enough time to think through the decisions you made. What could you have done to avoid this? You have worked so hard to support

as many people as possible. You are now old and exhausted. You wonder what could have happened to your mothers. You dream of them and hope to meet them in the afterlife if there is one. You wish you would have been able to understand what they left you, but you don’t regret your choices. Humans will disappear very soon. The planet is taking over, and really, what is actually so sad about that? Humans had their time. The Earth is getting ready for a new era.

47

It takes you another few days before you get a hold of a hen. But when you do, it almost feels like having a new crush. The hen’s presence feels familiar. It gives you the energy to go on. You name the hen Sia, like your old friend from the shelter.

With the help of Minerva—the last virtual assistant device that was invented twenty years ago—you launch into space with Sia. *Go to #50*.

48

The goat is peaceful and affectionate.

You spend a long while laying next to each other.

You see in their eyes the infinity of space.

You feel yourself pulled into the possibility of a million galaxies.

Go to #49.

49

You wake up next to an actual goat.
With the help of Minerva—the last smart home
device that was invented twenty years ago—you
launch into space with the goat.

Go to #200.

50

You follow the last coordinates of the message.
Finding no one.

You have survived the first month, spending
most of your time bonding with Sia.

They give you an egg a day despite the extreme
conditions.

You spend hours cuddling them.

Go to #51.

51

You're about to give up remembering your vision
"True journey is return".

A mysterious signal reaches you.

You follow it to a planet where you land at a
safe distance from the signal.

You arrive at a hilltop and from there you rec-
ognise four of your mothers gardening. They look
strangely alike, as if they have turned into each other.

They see you and they look scared at first. You
scream their names and your name. You can't believe
it. They look so young in comparison to you. You tell
them about everything you have lived through in the
last years. They tell you about their settlement here.

The pure air. The fertile soil. The absence of people
in the last decades. The planet operates as one force;
when you are here, your cells adapt to what is around.
You are the soil and the air. You are each other. The
connections between all particles are infinite and
eternal. *Go to #52.*

52

You want to convince them to go back to Earth and
share their knowledge. They should not abandon our
home. The planet needs us. People need us, even if
humanity is doomed we must share our knowledge,
teach respect and communion. Not escape. They
don't agree. They have spent so much time here, they
don't want to leave this union.

If you decide to stay with them, *go to #53.*

If you decide to go back to Earth, *go to #54.*

53

Sia dies after a few days. Their body didn't adapt to
the flow of energy that unifies all. You'll bury them
after performing a ritual. Your stay on this planet has
transformed you. After two hundred years you have
been absorbed. You are one.

54

Sia will feed you for most of the trip back. Arriving
back on Earth you are exhausted. You have no idea
how much time has passed. You don't find any signs
of human life. You meet a strange hybrid animal after
a few days. Sia is getting sick. The heat is unbearable

even at night. Sia dies after a full moon. You bury her while chanting all the beings that have gone extinct. You lay next to the small grave and wait for death. The planet is taking over, and really what is so sad about that? Humans have had their time. The Earth is getting ready for a new era.

200

Minerva took you to the location. Nothing. An asteroid belt propels you into a black hole.

In between dimensions.

Strange.

Unpredictable.

You align with a parallel reality. Colliding. Merging. Here you are 30 years younger in a ship with other beings but without the goat.

Go to #19.

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PAUL, THE OCTOPUS' DEATH AND OTHER
THOUGHTS ON ANIMAL, ORACLES
ALICE DOS REIS

On an October night, Paul the Octopus left this Earth. He was found unexpectedly deceased the following morning in the tank he'd lived in for most of his two-and-a-half year life at Sea Life Oberhausen Aquarium, Germany. Three months prior he had accurately predicted the results of seven matches in the 2010 FIFA World Cup, including the victory of Spain over the Netherlands in the final. He did so scuttling his body over, fully entering a container displaying the Spanish flag.

The image of Paul executing his ritual of prediction circulated the internet. He featured in national news channels and was widely discussed by specialists prior to the match. Around this time Paul began receiving death threats and the security around his tank was heightened.

After Spain's victory it's unknown whether Paul was officially asked to predict anything else. Visitors of Sea Life Oberhausen would address him telepathic questions in the hope for some sort of oracular sign, or ask for his blessing in their sporting ventures. When Paul died, however, there were no humans around. Just him, alone in his aquarium decorated with FIFA merchandise.

Paul was considered an animal oracle, succeeding countless other non-human species as mediums within human practices of divination since prehistoric times¹. The Etruscans forecasted by watching

the movements of hens and roosters, the Babylonians studied sleeping oxen's reaction to having their heads splashed with water. In ancient Greece and Rome, birds were favoured as animal oracles, and the observation of their movements and entrails was even institutionalized. Since Medieval times, witches have been known for working with animal familiars. The Azande people of North Central Africa still look at ants' eating patterns as well as termites and their mounds to discern the future, while in some western cultures, people will shudder at the sight of a black cat at night on the way home.

Today, many of the non-human species that might have been used for rituals of prediction across the world are either diminishing or going extinct—if not, their behaviours are altering radically. Following a tradition of animal-inspired prediction, it would seem relevant to consider species threat and extinction as signs of not only future calamities but of inexistent futures for many, if not all species. In the face of the alarming speed with which Earth is changing, every sign should be treated as the worst of omens.

Divination through the observation of animal behaviour (also called Zoomancy) has a long, varied and complex tradition. Beyond sports results, several human cultures have long been observing animals to predict between human political affairs (birds flight), to emotional relations (frog bones), births (doves), deaths (crows), misfortune (black cats) or luck (hares). One of the most consistent and widespread uses of animal prediction, however, has to do with weather

1. See Margo DeMello "Animals in Religion and Folklore" in *Animals and society: an introduction to human-animal studies*. New York: Columbia University Press, 2012.

and natural phenomenon forecasting. This type sits in interesting ground, somewhere between superstition and science: a frog entering a house announces the coming of rain, too many seagulls inland might indicate a tsunami, a shortage of hares in a field is a sign of draught, weird mammal and bird behavior could point to the imminence of an earthquake.

This knowledge has made it all the way to present times. In contemporary China, official observatories set up across zoos monitor the changes in the behavior of thousands of animals, a practice believed to help greatly in predicting seismic activity. In other parts of the globe less traditional and arguably more invasive technologies such as the Internet of Animals (a 'branch' of the Internet of Things) are being developed to both track and surveil animal behaviour². Ever smaller antennas are attached to the beaks of birds and the heads of Antarctic seals and polar bears. This kind of tracking technology can be utilized to help protect endangered species by quickly obtaining data on disturbances of their usual habits, it can also easily find one's lost cat, but equally, the internet of animals works to automate the fishing and hunting industries. From a smartphone in Amsterdam, one can easily connect to a seagull in New Zealand and be given predicted information on its migratory route. The knowledge of certain animal patterns that in the past might've been acquired by methodical observation and processed in rituals of divination, is today rendered by algorithms.

2. See Alexander Pschera *Animal Internet: Nature and the Digital Revolution*. New York: New Vessel Press. 2016

Plato and Aristotle believed that there is a portion of the human soul that is identical to the soul of animals, and that it is to that portion — cognitively tied to humans' animal instincts — that divinatory insights belong to. Classist Peter Struck pointed out that "within the Classical context, human intellects and corporeal bodies — animals and humans alike — sit in sometimes strident opposition. Via divination they find a medium in which they can collaborate"³. Arguably, it is not only in Classical context that humans and non-human animals are perceived as detached or even opposing. In the contemporary West, and strongly since the Enlightenment, human cognition has been understood as fundamentally separate from nature. And while practices of divination or prediction with non-human animals seem grounded in seeking knowledge beyond human rationalism and subjectivity, most fail to include both humans and animals as equals partaking in the same web of predicted futures. While humans might collaborate and have long collaborated with non-human animals as oracular messengers, the resulting predicaments often bounce back to humans and their affairs, the non-human medium regarded little more than a tool or symbol.

In the rural north of Portugal, a common superstition would be that if a lizard entered a house close to the date of a wedding, the bride would be unhappy. This belief, despite its rich symbology, is

3. Peter Struck "Animals and Divination" in *The Oxford Handbook of Animals in Classical Thought and Life* ed. Gordon Lindsay Campbell. Oxford: Oxford University Press. 2014

one that registers such anthropocentric tendencies in animal divination. The outcome of a human marriage would have little to no importance to a lizard hunting flies in a humid dwelling. On the other hand, it is also this kind of superstition that places human domestic lives and futures in humbling relation to nature and chance. For the superstitious human interpreter, the lizard is not only a messenger of fate but also a reminder of one's vulnerability in the face of incoming futures.

Today, in order to maintain a future for all species, it is imperative to work towards non-human animal oriented practices of prediction. Whereas Platonic thought believed humans and non-humans share a type of cognition associated with divination, the Stoics understood the entire cosmos as a one living animal and divination as an essential tool to help navigate its interconnected parts⁴. Developing technologies such as the Internet of Animals that work to connect human, AI and non-human cognitions alike are as uncomfortable as they could be promising if used as non-human oriented 'divinatory' tools. Tracking changes in animal behaviour to predict earthquakes and natural disasters can be helpful if set towards protecting those species as well. As climate change deniers insist on not believing the omens, a strong culture of collaboration and solidarity with non-humans is imperative. Practicing rites of inter-species togetherness, such as human divination with animals, might just be a way of working towards it.

4. Struck, "Animals and Divination"

Of course, it is difficult to imagine how inter-species collaborative practices of prediction might actually function in a mutually constitutive way. What might these practices look like? It can be argued that many examples, and mainly outside of western cultures did and do already gesture towards it. Think of witches and their animal familiars for instance: a symbiosis between two magical creatures with arguably different agendas that merge for reasons that often are not immediately obvious to the human partaker. What might a non-human understand as the act of taking part in a ritual? And how might the human participant respect their agency? It is difficult to imagine their sense of futurity, and even harder to talk about collaborating with non-human species when human conceptions of collaboration may vary so fluidly. These are questions I am not able to, nor aspire to being able answer. However, I would suggest that a human's approach to taking part in a ritual with non-humans, especially one that gestures towards the future, can be akin to working collaboratively—where platforms for learning and sharing knowledge are formed. By initiating a ritual of divination with non-human animals, one opens spaces of relating. Spawning from such spaces, inter-species rituals of prediction can encourage a shared sense of futurity that implicates both humans and non-human entities as active partakers in a weave of predicted futures. Processes of relating are not frictionless (there are sparks!) and maybe, that's what can enable them to work a little bit like magic.

SCHEMAS OF UNCERTAINTY

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THE FUTURE-ORACULAR:
PREDICTION, DIVINATION AND
THE POLITICS OF CERTAINTY
EMILY ROSAMOND

In 2007, an interviewer asked Google's then CEO, Eric Schmidt, what Google might look like in five years' time. Schmidt replied, "...we will get better at personalization. The goal is to enable Google users to be able to ask questions such as 'What shall I do tomorrow?' and 'What job shall I take?'"¹ Schmidt's pronouncement evokes the scope of Silicon Valley's fortune-telling ambitions—the remarkably intimate intertwining of seeking, knowing, predicting and nudging envisioned by data-rich businesses. This highly-tailored, future-oriented bent has only thickened since. In recent years, business scholar Shoshana Zuboff has described "surveillance capitalism" as "selling access to the real-time flow of your daily life—your reality—in order to directly influence and modify your behavior for profit."² Zuboff details tech firm innovations that collect "behavioural surplus," such as Samsung's Smart TV. This voice-responsive device collects not only voice commands, but all speech in its vicinity (including highly personal information), and sells dialogue chunks on to third parties seeking to target advertisements or perfect voice system algorithms.³ Some legislation has been passed against such practices. However, Zuboff contends that legal constraints will ultimately remain

1. Eric Schmidt, in Caroline Daniel and Maija Palmer, "Google's Goal: to Organize your Daily Life," *Financial Times*, 22 May, 2007 www.ft.com/content/c3e49548-088e-11de-b11e-000b5df10621 (Accessed 25 February, 2019); and Karl Palmås, "Predicting What You'll Do Tomorrow: Panspectric Surveillance and the Contemporary Corporation," *Surveillance and Society* 8 (3), 2011: 347.
2. Shoshana Zuboff, "Google as Fortune Teller: The Secrets of Surveillance Capitalism," *Frankfurter Allgemeine Zeitung*, 05/03/2016, www.faz.net/aktuell/feuilleton/debatten/the-digital-debate/shoshana-zuboff-secrets-of-surveillance-capitalism-14103616.
3. Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs, 2019), 263-4.

ineffective, so long as "the prediction imperative cracks the whip to drive the hunt for unexplored pieces of talk from daily life."⁴

If Silicon Valley companies seek to predict the future, the best way to predict the future is to *shape* it—by entering into the flow of daily decisions, and architecting available choices (click here!) for those decisions to seek.⁵ Intervening in available decisions enables companies to evince a certain degree of certainty about their ability to shape the future. Indeed, for Zuboff, the surveillance capitalist prediction imperative is "a challenge to the elemental right to the future tense, which accounts for the individual's ability to imagine, intend, promise, and construct a future."⁶ But what are this prediction imperative's histories, its grammars of time,⁷ its unexpected nuances? How else might prediction imperatives be aligned—perhaps running counter to surveillance capitalism?

Today's prediction imperatives are deeply entangled with histories of risk. Long before online platforms such as Google and Facebook became hegemonic, companies and institutions devised and administered statistical calculations—from actuarial methods for predicting recidivism amongst

4. Zuboff, *The Age of Surveillance Capitalism*, 266.
5. I am thinking of Thaler and Sunstein's term 'choice architecture' here, in Richard Thaler and Cass Sunstein, *Nudge: Improving Decisions about Health, Wealth and Happiness* (New Haven: Yale University Press, 2008).
6. Zuboff, *The Age of Surveillance Capitalism*, 20.
7. I borrow this term "grammars of time" from Peter Rawlings' essay "Grammars of Time in Late James" (*The Modern Language Review* 98(2), 2003: 273-284), in which Rawlings addresses the "burgeoning anteriority" (p. 273) of both America in the post-Civil War period, and of Henry James' writing, the "classically American predicament that is pondering (prospectively and retrospectively) the foreclosure of choice, the ultimate unavailability of ubiquity, even for natives of the New World, and the evanescent dream of sustaining endless possibility, and the impossibility of doing so" (p. 278).

potential parole grantees, to credit scores, insurance premium calculations, and supply-chain modeling.⁸ These methods often aimed to determine who (or what) might be a safe bet or a grave risk, and to grant benefits (from credit to parole) or take precautions (think insurance or hedging) accordingly. The modern “risk society”, as Ulrich Beck called it, obsessively calculates and manages risk—and in so doing, entrenches the very concept of risk as a mode of engagement with the world.⁹ Given this, it is no surprise that today, subjects’ future behaviours have come to be ranked according to varying levels of trustworthiness and purchasing power, measured according to obscure and often proprietary methodologies. (Who understands exactly why they were given a particular credit score, or how a travel app offered them a different fare for the same flight than it offered a friend?)¹⁰ Probabilistic predictions aim to maximize gains and mitigate risk, although their widespread application can have unexpected consequences—from entrenching new forms of inequality,¹¹ to exacerbating systemic risk.¹²

8. See, for instance, Bernard Harcourt, *Against Prediction: Profiling, Policing and Punishing in an Actuarial Age* (Chicago: University of Chicago Press, 2007); Martha Poon, “From New Deal Institutions to Capital Markets: Commercial Consumer Risk Scores and the Making of Subprime Mortgage Finance,” *Accounting, Organizations and Society*, Vol. 35, No. 5 (October 27, 2008): 654–674; Michel Feher, *Rated Agency: Investee Politics in a Speculative Age* (New York: Zone Books, 2018); and Jaron Lanier, *Who Owns the Future?* (New York: Simon & Schuster, 2014): 71–2.

9. Ulrich Beck, *Risk Society: Towards a New Modernity* (London: SAGE, 1992); Anthony Giddens and Christopher Pierson, *Making Sense of Modernity: Conversations with Anthony Giddens* (Stanford: Stanford University Press, 1998).

10. See Rafi Mohammed, “How Retailers Use Personalized Prices to Test What You’re Willing to Pay,” *Harvard Business Review*, 20 October 2017, www.hbr.org/2017/10/how-retailers-use-personalized-prices-to-test-what-youre-willing-to-pay.

11. Frank Pasquale, *The Black Box Society: The Secret Algorithms that Control Money and Information* (Cambridge, MA: Harvard University Press, 2015).

12. Randy Martin, *Knowledge, Ltd: Toward a Social Logic of the Derivative* (Philadelphia: Temple University Press, 2015).

Statistical calculations of risk, carried out in decades past, were cumbersome. Now, in the so-called age of big data, machine learning algorithms identify, predict and intervene in behavioural patterns. They capitalize on potential synergies between subjects’ and platforms’ desire in real time, pre-empting the risks of non-payment or non-engagement. They architect choices; intervene in daily lives, nudging behaviour into alignment with platform desires; and bet on the success of their interventions. To put it very broadly: from the collection of data on deviant behaviour in the Napoleonic era,¹³ to today’s Samsung Smart TVs, risk calculation and behavioural prediction have become increasingly intertwined, and increasingly actionable in real time.

Even so, something in the above description has already left the ‘risk’ narrative behind. It evades the prediction imperative—insofar as prediction (in its modern and recent iterations) is that which calculates and mitigates risk. Aligning subject-desire and platform-desire cannot be carried out solely in the province of prediction; for desire is *production*, not prediction. Desire progresses by means of found, leaned-into synergies between agents—not through a predetermined image of a ‘what’ that is somehow lacking—which could, in its predetermined-ness, be predicted in advance.

“What shall I do tomorrow?” Karl Palmås has described Google’s ambitions for the person-

13. See Ian Hacking, *The Taming of Chance* (Cambridge: Cambridge University Press, 1990).

alization of seeking (expressed by Schmidt above) as a perfect exemplar of prediction within the contemporary corporation's surveillant operations.¹⁴ Yet Schmidt's statement—with its attitude of seeking, desire, and a coming-toward-certainty around a particular decision—also speaks to a newly predominant cultural logic that goes well beyond mere prediction. It envisions an *oracular mode of address*: a fatalistic, future-oriented mode of expression governing how fortune-telling platforms and seeking subjects interface with one another. On the face of it at least, this mode of address conjures up an image of the all-knowing platform's answering-attitude, which responds to uncertain, decision-fatigued, neoliberal 'Googling' subjects, seeking clear and singular paths toward their 'right' course of action. The *future-oracular* is a mode of address bound up with the platform's expression of its unmitigated and flexibly authoritative capacities for deploying information, as well as its need to activate this authoritativeness through the seeking-subject's performative act of questioning. Thus, Google and other like-minded companies draw not only from the histories of prediction (*qua* risk mitigation), but also from the histories of *divination*: a subset of predictive practices foregrounding the role of ritual acts seeking meaningful relationships to chance.

Oracular practices can be traced back to the ancient world—as, indeed, can many other modes of prediction. Perhaps briefly comparing two well-

known predictive apparatuses from ancient Greece—the Antikythera mechanism, and the Oracle of Delphi—might help to tease out the distinctions between prediction and divination, which will in turn set the stage for my account of how today's future-oracular mode of address might differ from that of the ancient Delphic oracle. The Antikythera mechanism was discovered in a shipwreck in 1901, and is thought to have been made between 150 and 100 BC. It is often described as the world's first analogue computer: a complex, delicately calibrated, multi-gearred device, used to predict planetary positions and other astronomical events, and to track the ancient Olympic Games' four-year cycle. The clock-like Antikythera mechanism predicted planetary occurrences that came around "like clockwork"—with perfect and near-immutable regularity, rendered comprehensible by a gear system nuanced enough to map the delicate patterns at play.

By contrast, the oracles at the Temple of Apollo in Delphi (c. 8th – 4th century B.C.E.) traded in contingency. Supplicants came to the Oracle of Delphi from far and wide, seeking counsel on political and personal decisions. Their questions pertained to unpredictable milieus, and were tinged with curiosity about the best course of action. They prepared their questions with careful reflection, under the guidance of priests. Once prepared, the oracle would inhale intoxicating ethylene vapours emerging from active fissures in the temple floor, and give cryp-

14. Palmås, "Predicting What You'll Do Tomorrow," 347.

tic answers to the seekers' questions.¹⁵ Inscribed on the site, the phrase "*gnothi seauton*" ("know thyself") greeted supplicants. An incorrect interpretation of the oracle's message, based on flawed self-understanding, could bring disaster.¹⁶

Whereas the Antikythera mechanism's predictions presume a regular unfolding of events over time, the Temple of Apollo in Delphi constructs an intense interface between oracle and supplicant, earth and god. These actors' momentary intermingling voices contingent futurities of change and chance, the very shape of which hinges on subjects' self-understanding. But of course, the situation also goes far beyond self-understanding, forming a fatalistic architecture of doubled supplication (the seeker asks the oracle, the oracle asks the gods) from a peculiar admixture of ethylene, temple rocks, mythologies and human actors. Merging human and non-human agencies, the oracle opens decision-time.

Perhaps, through an interest in habit and patterns of behaviour combined with increased computational power, big data analytics begin to merge the Antikythera mechanism and the oracle's distinct approaches to the future: fashioning their

political economies of propensity¹⁷ from robustly identified behavioural patterns—consumer tendencies and habits-in-form unfolding as if according to some complex clockwork—combined with subjects' attitudes of seeking, Googling, wishing to know. This intermingling of calculation and divination is perhaps akin to what Joshua Ramey describes as a colonization of divination. "At the heart of divination is the practice of relating to chance as an occasion to make meaning,"¹⁸ Ramey writes. Yet in our time, chance has been misaligned: a "betrayal of chance is at the heart of neoliberal ideology, which exonerates markets as a form of spontaneous social order based on chance, but disciplines chance to conform to market demands."¹⁹ Markets harness contingency and, indeed, seek to calculate risks in precisely the places that they are least expected to emerge: highly improbable, 'black swan' events. This results in what Ramey calls a "securitization of the possible," a "stranglehold of the status quo on the future" and the "foreclosure of the genuinely unknown."²⁰ "Such pre-emption," Ramey writes, "*seems* to take the form of a divining of the future, but in actuality is simply a kind of blank repetition of the demands of the present. This is a far cry from traditional divinatory practices."²¹ Ramey calls

15. John R. Hale, Jelle Zeilinga De Boer, Jeffrey P. Chanton and Henry A. Spiller, "Questioning the Delphic Oracle: When science meets religion at this ancient Greek site, the two turn out to be on better terms than scholars had originally thought," *Scientific American* (August, 2003): 66-73; Henry A. Spiller, John R. Hale and Jelle Z. De Boer, "The Delphic Oracle: A Multidisciplinary Defense of the Gaseous Vent Theory," *Clinical Toxicology* 40(2), 2002: 189-196. Of course, oracular practices proliferated in the ancient world; Delphi is but one example.

16. King Croesus of Lydia met with such a disaster, after asking the Delphic Oracle if he should go to war against the Persian Empire. The oracle said: "If Croesus goes to war he will destroy a great empire." Interpreting this as an auspicious sign, Croesus went to battle – only to realize that the great empire that was to be destroyed was his own.

17. I take the term "political economy of propensity" from Nigel Thrift, "Pass it on: Towards a political economy of propensity," *Emotion, Space and Society* 1(2), 2009: 83-96.

18. Joshua Ramey, *Politics of Divination: Neoliberal Endgame and the Religion of Contingency* (London: Rowman & Littlefield, 2016), 8.

19. Ramey, *Politics of Divination*, 9.

20. Ramey, *Politics of Divination*, 114.

21. *Ibid.*

for decolonizing divination practices, which have been so ruthlessly reordered by financial predictive apparatuses.

“What shall I do tomorrow?” Users retrieve many attractive options when they Google something, with the presumed-to-be ‘best’ option appearing at the top of the search results, or first in the autofill suggestions. This offers accelerated pathways to knowledge, action and future behaviour—but, in the very same gesture, also preempts a fuller range of genuinely unforeseen possibilities. Basing suggestions on what platforms might ‘think’ users want, thereby precluding more contingent encounters between subjects and information, enacts something like what Ramey describes as a neo-liberal stranglehold on the future. Yet it also progresses by means of concentrating information through acts of questioning—something that the ancient Delphic oracle also enacted. Why, after all, were the oracles seen as bearers of truth? Firstly, as John R. Hale and Jelle Zeilinga De Boer suggest, the oracle’s cryptic phrases could be neither proven nor disproven.²² Speaking enigmatically, the oracle can never be wrong; if her advice were wrongly interpreted, surely this would be due to the seeker’s flawed self-understanding. But secondly, because querents travelled from all over the ancient world to consult the Delphic oracle, the priests who man-

aged them learned a great deal about the events of the day by listening to their questions.²³ Thus, when someone came asking for advice as to, say, whether or not to go to battle with a neighbouring city-state, the priests could make use of the information they had gleaned from other seekers’ questions to inform the offered answers. This distribution of informational power strangely echoes Google’s. As a major gateway connecting questions to answers—*governing answerability*—the latter amasses yet more information by learning from users’ questions and queries.²⁴ Of course, it accumulates all sorts of biases and feedback-fuelled presumptions along the way.²⁵ The future-oracular mode of address enacted by the oracles of Delphi and their attendants connects a seeker of counsel with a multivalent body of information, which is then reflected back to the seeker as a prophecy. This scenario consolidates the political power of the priests, the guardians of a centralized information-hub. Though its claims to authority are decidedly different, and it routinely preempts the genuinely unknown, Google’s version of the future-oracular draws out the Delphic propensity to concentrate information through its means of connecting questions and answers—a potential long since embedded in divination practices. Through

23. *Ibid.*

24. And just as the oracles at Delphi were handsomely paid for their services by seekers bringing lavish gifts and tributes from the city-states, so Google compensates itself richly through selling user information to advertisers and, in turn, selling advertisers the chance to win at keywords auctions through its AdWords program.)

25. See, for instance, Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (New York: New York University Press, 2018).

22. *The Oracle of Delphi: Secrets Revealed*, The History Channel, 2003, [Online]. Available at: www.youtube.com/watch?v=i1uQgvopvAg (Accessed: 12 September 2015)

a tightening of feedback loops,²⁶ the ‘Googling’ version of the future-oracular uses information concentration and analysis to encase its subject in self-actualizing self-similarity: a sheath of personalized potential.

Thus, today’s future-oracular mode of address enacts highly tailored, prophetic claims, seemingly addressed to particular subjects: claims to present not exactly—not entirely—what *will* happen to a given subject but, rather, what *should* be carried out: the best path forward, given an array of available propensities and possibilities. As such, it emblemizes something of the tensions between prediction and precarity, self-actualization and soft prohibition that surround decision-fatigued²⁷ neoliberal subjects and their decision-making processes. In the twenty-first century, when (as Michael Marder recently put it) “all the world’s a dump,”²⁸ austerity, shrinking job markets, deteriorating environmental conditions, and tattered social and mental ecologies instantiate systemic uncertainty, which is felt as lived precarity: in homes, friendships, families. For many, trivial, day-to-day choices (which shampoo should I buy? which jeans?) yield dozens, if not hundreds of

26. Though it is beyond the scope of this essay to critically engage with this topic, the term hyperstition usefully describes the means through which feedback loops entangle the relationships between present and future, and enable narratives to produce their own realities. See Simon O’Sullivan, “Accelerationism, Hyperstition and Myth-Science,” *Cyclops: Journal of Contemporary Theory, Theory of Religion and Experimental Theory*, no. 2 (2017), 11–44.

27. See Barry Schwartz, “Self-Determination: the Tyranny of Freedom,” *American Psychologist* 55(1), 2000: 79–88; Barry Schwartz, *The Paradox of Choice: Why More is Less* (London: Harper Collins e-books, 2004); and Richard Thaler and Cass Sunstein, *Nudge: Improving Decisions about Health, Wealth and Happiness* (New Haven: Yale University Press, 2008).

28. Michael Marder, “All the World’s a Dump,” *The Philosophical Salon*, 10 November, 2018: www.thephilosophicalsalon.com/all-the-worlds-a-dump/.

available options. Yet more significant, life-altering choices (where can I afford to live? would going to college pay off? what job shall I take?) seem to yield fewer and fewer viable options. In light of this proliferation of trivial choice, combined with the foreclosure of significant possibilities, the need to enhance serendipity comes to the fore. A nudge in the ‘right’ direction can economize trivial decision-making.²⁹ When it comes to more serious decisions, performing the rite of becoming-networked-profile can produce possible, fertile weak-tie connections in a barren landscape of diminished opportunity. (In a newly entrepreneurial-vocational iteration of Cinderella-like hope, users tweak LinkedIn profiles, hoping to be clicked on by a connection’s connection...) Google and so many other platforms—the serendipity accelerators—easily find their supplicants, even as their regime of accumulation (which tends to massively concentrate wealth) contributes to the very conditions from which these supplicants seek respite.

Many accounts of online and statistical predictive apparatuses, particularly those that accrue around the term ‘algorithmic governmentality,’ argue that the latter “bypasses and avoids any encounter with human reflexive subjects.”³⁰ Instead of revolving around—or indeed addressing—individuals or

29. On nudging, see Richard Thaler and Cass Sunstein, *Nudge: Improving Decisions about Health, Wealth and Happiness* (New Haven: Yale University Press, 2008).

30. Antoinette Rouvroy, “The End(s) of Critique: Data-Behaviourism vs. Due-Process,” in Mireille Hildebrandt and Katja de Vries, eds, *Privacy, Due Process and the Computational Turn: Philosophers of Law Meet Philosophers of Technology* (London: Routledge, 2012), 2 (pre-print version).

subjects, online predictive apparatuses transform selves into ‘dividuals’: divided-up subsets of relations, traits and data.³¹ Indeed, when our data is parsed into credit scores, customer profiles, and algorithmically-analysed identities, the apparatuses which have made these distinctions certainly do not apprehend ‘us’ as sovereign subjects. Though they may relentlessly enumerate traits and attribute propensities, they do not conceive of individuality as such. There is a heady debate around whether, how, and to what extent ‘the subject’ is still a viable site from which to stage resistance to the behaviourist, predictive imperatives of surveillance capitalism (and neoliberalism more broadly). Wendy Brown famously laments the loss of individual sovereignty under neoliberalism in *Undoing the Demos*.³² Counter to this, Joshua Ramey has argued that Brown’s argument is afflicted with nostalgia for the sovereign subject. He suggests that a more radical approach might be “dividuating the demos:”³³ politicizing, and indeed decolonizing the terrain of the dividual, which the current phase of capitalism has so richly mapped and thoroughly leveraged.

Although today’s predictive apparatuses may indeed bypass subjects, this by no means renders Googling subjects, Google’s supplicants, irrelevant. One reason to theorize the future-oracular mode of address is that it accounts for the predictive imper-

ative from the perspective of the seeking-subject: the subject who ‘Googles,’ who wishes to know, who seeks alignment with the platform’s ecologies of information and in so doing, transforms the corporation into a verb, an act, an incantation. Given the scope of the seeking-subject’s rhetorical power within scenarios of search—her curiosity becoming the very reason for the business model’s claim to legitimacy—she cannot be written out of the equation so easily. But here, she is not so much an individual, as the embodiment of a very particular seeking attitude: an *attitude of answerability*,³⁴ an attitude that bears the marks of the financial demands of the present, and is thoroughly aligned with surveillance capitalism’s colonization of seeking. Despite its over-determined alignments with the surveillance-capitalist present, the Googling subject’s attitude also carries an openness to transformation that hints at the potential for seeking to be aligned otherwise. To decolonize divination, following Ramey, perhaps involves considering what is to be made of the Googling-subject’s performance of seeking and to recognize that these acts of seeking carry the seeds of another order; another set of alignments of which the current iterations of the future-oracular are but one variety. Perhaps realigning the seeking-subject’s attitude would involve counter-speculating on surveillance capitalism’s politics of certainty. Insofar as surveillance capitalism enacts confidence in its

31. Gilles Deleuze, “Postscript on the Societies of Control.” *October* 59 (Winter, 1992): 3-7.

32. Wendy Brown, *Undoing the Demos: Neoliberalism’s Stealth Revolution* (New York: Zone Books, 2015).

33. Ramey, *Politics of Divination*, 149.

34. See Mikhail Bakhtin, *Art and Answerability: Early Philosophical Essays* by M. M. Bakhtin, ed. Michael Holquist and Vadim Liapunov, trans. Vadim Liapunov (Austin: University of Texas Press, 1990).

future predictions by actively *producing* the future it purports to predict, so acts that reorient attitudes of seeking might also enact confidence in their ability to redirect the searching attitude toward other apparatuses, more indeterminate (or differently determinate) alignments.

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DUNGEONEERING
TOM KEMP

This text focuses on the cultural origins and para-history of the fantasy dungeon, and by extension, the roleplaying game format. Positioning the form as an organic, diffuse reaction to the complex cultural phenomenon of medievalism, an array of mechanics relating to the modelling, analysis, and contention with abstract, complex or subjective forces are described.

The argument made by the majority of Medievalists that the Middle Ages are a period somewhat arbitrarily defined historically and continually reused and reinvented to promote ideological ideas about the present has existed almost as long as the definition itself. Now more a convenient metaphor and site of projection for alterity than actual history, the Middle Ages has become a 'cultural myth'—able to emphasise in relief the values of whatever the current modernity may be. Because of this constant reinvention and reuse of the Middle Ages to serve this process, contemporary Medievalisms are as much ontological as historical, referring not just to the past, but to the multifarious versions of that past—the Middle Ages as mediated by the Renaissance, the Enlightenment, Romanticism, or Neoliberalism are all sites that can be visited and inter-referenced; Medievalism has folded in on itself.¹

Vocabularies of Medievalism are ubiquitous and immediately understood, and yet hold no con-

1. Andrew B. R. Elliot, *Medievalism, Politics and Mass Media: Appropriating the Middle Ages in the Twenty-First Century*, Kindle ed. (Martlesham: The Boydell Press, 2017) ch.1

text. They are simultaneously visible and invisible, embodied and discorporate. 'Banal Medievalisms' abound—North American White Supremacists march with Viking-era shields bearing the insignia of St. Maurice, black patron saint of the Holy Roman German Empire,² while thousands of IKEA fake fur rugs are shipped to Belfast every year and covered in artificial snow for actors to wear in the production of *Game of Thrones*.³

This ontological contradiction and its larger consequences in attempting to comprehend the human relationship to Medievalism can be understood by classifying the source of these phenomena as an *eerie entity*. Mark Fisher repurposes the word *eerie* to describe a sensation of displaced agency, where the profoundly non-human is experienced as wielding an autonomous power.⁴ In literary terms, when something is *eerie*, a sense of dread is evoked through glimpses, tremors and tricks of the light that yield both failures of absence: lingering spirits, inexplicable smells and phantom doubles, and failures of presence: disembodied voices, gaps in memory and internal alien-ness.⁵ The muddled extent of human agency in such scenes provokes a questioning of the influences on humanity of complex, immaterial and inanimate forces—the paranormal having always

2. Josephine Livingstone "Racism, Medievalism, and the White Supremacists of Charlottesville." New Republic, 15 Aug. 2017, www.newrepublic.com/article/144320/racism-Medievalism-white-supremacists-charlottesville.

3. "Designing the Middle Ages: The Costumes of GoT," youtube.com, Getty Museum, 4 May 2016, www.youtube.com/watch?v=fVv1oH1hLlo.

4. Mark Fisher, *The Weird and the Eerie* (London: Repeater Books, 2016) p.10

5. Roger Luckhurst. "Making Sense of 'The Weird and the Eerie.'" *Los Angeles Review of Books*, 11 Mar. 2017, www.lareviewofbooks.org/article/making-sense-of-the-weird-and-the-eerie/.

been a method for the figuration of power that cannot otherwise be visibly expressed.⁶

If the uncanny experience of the eerie is symptomatic of larger, invisible powers, these powers themselves can be defined as *eerie entities*. As Fisher puts it, where spaces are empty of the human but still somehow animated, we might feel the echoes of an eerie entity, and are reminded “that ‘we’, ‘ourselves’ are caught up in the rhythms, pulsions, and patternings of non-human forces.”

The most significant eerie entity for Fisher is the phenomenon of capital, something that can be understood as being “at every level an eerie entity: conjured out of nothing (...) [it] nevertheless exerts more influence than any allegedly substantial entity.”⁷ The consequences of a systemic global engagement with capital are so various and ever-present that a holistic understanding of its relationship to the human can only be granted through its rhythms and tremors — the absurd, traumatic and profoundly non-human anomalies it produces in human life are direct experiences of Fisher’s eerie.

By considering Medievalism in the same cast, a case-study can be drawn, detailing human responses to eerie Medievalist phenomena and their ultimate collection in and encircling of the roleplaying game *Dungeons & Dragons* — a format that can be consid-

ered as a potential technology for not only depicting eerie entities, but communicating with them.

Before examining the formal mechanics of *Dungeons & Dragons*, I will briefly account for the circumstances leading up to the publication of the game and how Medievalism influenced its genesis. I will do so in order to give a background on how these technologies developed and why they are specifically derived from the eerie sway of Medievalism.

Dungeons & Dragons finds its most direct roots in the historical tradition of wargaming. These systems can be traced back through a history of games — the most obvious example being Chess — however it is with the inception of the Prussian ‘kriegsspiel’ in 1812 that can mark the genesis of *D&D*.⁸ Developed as a device for training military officers in the art of battle tactics, the iterations of the board game, incidentally produced over much the same time period as Neo-Gothicism, strived to find a balance between accurate representation of reality and participant comprehensibility. Kriegsspiel’s intention was, after all, to be a pedagogical military technology. The remarkable innovations in game mechanics that this research generated regarding simulation technologies were carried through into *D&D* and the majority of other roleplaying game systems — a subject that will be noted in the later section regarding simulation mechanics.

6. Robert MacFarlane. “The Eeriness of the English Countryside.” *The Guardian*, 10 Apr. 2015, www.theguardian.com/books/2015/apr/10/eeriness-english-countryside-robert-macfarlane.

7. *Idem*

8. Jon Peterson, *Playing at the World*, Kindle ed. (Los Angeles: Unreason Press, 2012) ch.3.

As with most military technology, the kriegsspiel slowly melted into civilian culture — however, in this case, not initially as a direct commercial conversion. Over the next century and a half, simulated war-games moved from the courts of Prussian kings to the sheds and cellars of solitary men; hobbyists tinkering with their own game systems and hosting groups of friends, or, as last resort, subjecting their wives to homebrewed battlefield simulations.⁹ Notable figures included in this pioneering phase of war gaming were Robert Louis Stevenson, father of the adventure story, who turned the events in his personally devised war games into short fictional accounts, and H.G. Wells, father of science fiction, whose published game *Little Wars* was an attempt to use the kriegsspiel as a tool for pacifism through obviating the need for real conflict. Wells created not only one of the first commercially available wargames but also the first to have a consciously anachronistic setting, so as not to be too realistic.¹⁰ Following the more widespread release of wargames like *Tactics* in the 1950's, hobbyists in the United States became unified under a number of consistent and widely available gaming rubrics. They formed clubs, tournaments and a myriad of publications to find opponents and distribute game rules; and through play-by-mail games, they carved up blocks, cities, counties and states into terrain that could be contested and held by 'generals' skilled enough at simulated strategy.¹¹

9. Peterson, *Playing at the World*, ch.1.

10. *Ibidem*, ch.3.

11. *Ibidem*, ch.1.

Given the hindsight of *Dungeons & Dragons'* dominance over the tabletop game market, the development from the mass unit war game (traditionally based around either a contemporary technological setting, like the tank warfare of *Tactics* or a specific historical setting like the European 1901 of *Diplomacy*) into the character oriented, narratively driven fantasy adventures of *D&D*, is uncannily organic; its defining qualities evolving in multiple places at once through the informal communities of the period. The specific transition from a re-enactment of a contemporaneous modern warfare setting to an exploration of Medievalist fantasy is notable here as the uprooted and eerie Medieval seems to have offered itself up to the wargamers. This began very innocuously, with the first published wargame in Medieval setting being developed mainly as a tactic for promoting pre-existing Medieval miniatures and vacuum-formed castles. These plastic castles, providing a perfect material analogy for the empty, pliable Medievalist referent, were sold by the same distributor who commissioned the ruleset, hoping to shift extra stock. This sales technique unexpectedly gained a crucial velocity granted by, despite H.G. Wells' best efforts, actual conflict: The Vietnam War.

When the letters pages of wargamer's zines became full of community members drafted into real warfare, and anti-war and counter-cultural movements in the U.S. gained traction, re-enacting the tank battles of Erwin Rommel as a leisure activity began to seem both personally objectionable and,

crucially, unprofitable for wargames publishers like Avalon Hill. Medievalism, availing itself to this growing space for genre, presented a perfect replacement. The ambiguity and unadulterated otherness of the period made it ideal for displacing the wargame into a guiltless zone, admitting the necessary levity of play. Beyond that, a popular perception of warfare in the Medieval period as polite, ordered and chivalric provided not only a comforting contrast to the chaotic, brutal and asymmetrical conflict in Vietnam, but was also mechanically sympathetic to the ludic structure of wargames. The setting provided sides that were evenly matched technologically, with agreed-upon rituals of conduct and clear victory conditions.¹²

The move to a Medieval setting enabled not only deflection of criticism from the U.S. counter-culture, but also its capitalisation. When the explosively successful paperback edition of Tolkien's *Lord of the Rings*, brought the fantasy genre and its sword-and-sorcery forebears into the U.S. mainstream in 1965, the counter-culture began to adopt elements of its pastoral depictions of agrarian simplicity, harmony with nature and removal from modern industrial society. The feudalism and racial war intrinsic to the narrative was forgotten. A year after the book's publication, on May Day in the Summer of Love, the Society for Creative Anachronism was founded — the first 'living history' group, dedicated to re-enacting pre-17th century European cultures. The group also published *A Handbook of the (Current) Middle Ages* in

12. Peterson, *Playing at the World*, ch.2.

1968 — a manual on Medievalist clothing patterns, feudal group organisation, and the construction and use of safe, re-enactment friendly weaponry [FIG 1].¹³ The influx of plastic-castle inspired Medieval wargames that appeared at this time aligned directly with these broader cultural movements — some members of the Society for Creative Anachronism were also members of *D&D* co-creator Gary Gygax's first Medieval wargaming group, The Castle and Crusade Society, and so when Gygax's first Medieval wargame miniatures system, *Chainmail*, was published in 1971, it was a natural channelling of both of these cultural and commercial forces.

While *Chainmail* was intended to be an accurate simulation of Middle Ages warfare, it also featured an extremely significant afterthought — a short supplement covering the optional use of fantasy monsters, powerful heroes and magical abilities aggregated from the literature of Tolkien, Howard and Moorcock.¹⁴ It was this rudimentary, incidental appendage and the growing market for fantasy fiction that it tapped which gave *Chainmail* its commercial niche and success, heralding an important shift: from wargamers pursuing game systems that accurately re-enacted history to pursuing game systems that attempted to simulate something intrinsically subjective. Gygax, not having the copyright to any specific fantasy literature, was forced to instead provide a kind of toolset for re-enacting a fannish

13. The Society for Creative Anachronism, *A Handbook of the (Current) Middle Ages*. (San Francisco: The Society for Creative Anachronism Inc, 1968)

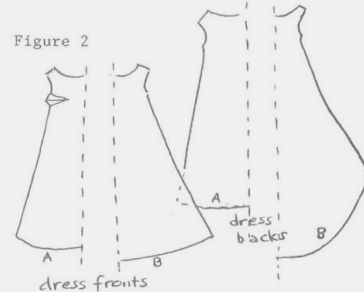
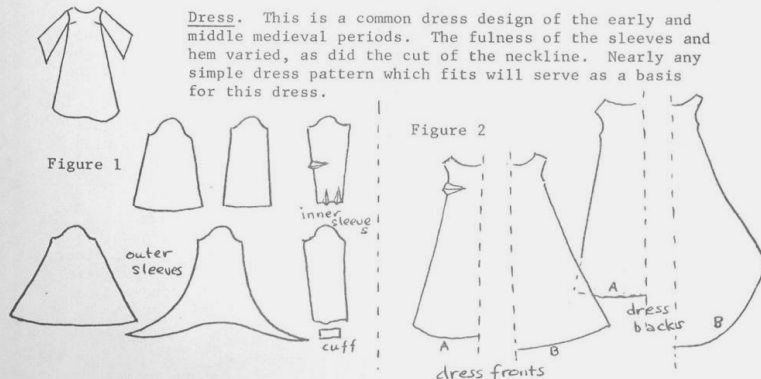
14. Peterson, *Playing at the World*, ch.2.

While I do not wish to malign the art of costume making, I suggest that you make clothes, rather than costumes. Costumes are often unable to take the strain of dancing, lounging and picnicing, to say nothing of fighting. Also, they are often less effective than clothes in the light of day. Many medieval styles are so readily sewn as to make costumery unnecessary. In selecting what you will wear to an SCA event, use common sense. Consider the nature of the event, what you will be doing, the weather, the time at your disposal, and funds. A velvet gown with yards of skirt and enormous sleeves can be very lovely, but is unlikely to remain lovely if it is worn to a tourney on a hot and dusty summer day. If dust and sweat do it no damage, picnicing and dancing probably will. There is a wide variety of styles at your disposal. Some of these I'll discuss a little later.

Women's Clothing

Early Medieval European women's clothes tended to be long loose dresses with long sleeves. Many robes and towel dresses are good approximations of these styles. Also, they can be made very quickly, since there is little fitting and few seams involved. Most peasant costumes are quite suitable; if you have such clothing do not fear to wear it. Since we do not require European garb, a sari or kimono is quite acceptable. If your garb implies an action, you may be asked to demonstrate it. You need not comply, of course, but do not dress as a harem dancer if you would be embarrassed by a request to perform.

Please note that my tailoring instructions are not completely authentic. If this offends you, there are many texts available for more accurate patterns. Darts and set-in sleeves are relatively recent innovations. Medieval dresses which were not terribly loose had gussets. A truly authentic dress is likely to appear clumsy to the modern eye.



amalgam of popular fantasy concepts, allowing for the same kind of selective reading that the pastoral counter-cultural movement had made of *Lord of the Rings*. As we will come to see, this notion was hugely important to both *Dungeons & Dragons* and potential communications with the eerie. Additionally, in *Chainmail*, a nascent form of the titular dungeon from *D&D* can be seen — here implanted, cuckoo-like, as a briefly ruled outline for how siege tunnels in castle sieges could be secretly mapped on graph paper and administered by a referee. It is appropriate that these subterranean spaces began life as siege tunnels. By examining one final eerie tale leading up the publication of *Dungeons & Dragons*, concerning the Blackmoor Campaign, we can see the uncanny way by which these spaces clandestinely burrowed themselves into the imagined territory of Blackmoor, and finally the title of the game.

The Blackmoor Campaign of *D&D*'s co-creator Dave Arneson began life as a series of Medieval multiplayer sessions of *Chainmail* set in a shared universe he had invented, where participants played versions of themselves transported to a fantasy world to hold command over armies and territories. The characters and world they collectively imagined was persistent between play sessions, and so naturally, the players increasingly began to place narrative focus on their individual characters defending the Kingdom of Blackmoor from evil and taking occupation of its castle — inevitably another vacuum-formed plastic structure [FIG 2]. Once, however,

this castle was taken, Arneson struggled to find further challenges for the players — in a narrative sense, they had reached the end of their third act. In an effort to extend the playability of his game, Arneson used Gygas's siege tunnel rules to create a hidden, labyrinthine system of underground passages, accessible from the cellars of Blackmoor Castle, containing enough traps, monsters, puzzles and treasure to occupy his players. This simple adaptation had remarkable consequences, both for the fantasy world of Blackmoor and roleplaying games in general: The empty void defined by the interior of the plastic castle mould, symbolic of the empty Medieval, was finally filled. Medievalism's hollow core was now riddled through with an improbably syncretic space combining prison, maze, Egyptian tomb, story structure and animal lair: *the dungeon*. Arneson's players, suddenly finding rich new territory right under their feet, eschewed their large armies and began to traverse the tunnels as individual characters, finding this system of subterranean exploration and adventure so addictive that the rest of the Kingdom of Blackmoor was left to wither. Its lands and citizens became a vestigial component of the fiction, shrinking in size and complexity as the tunnels grew ever deeper, eventually forcing Arneson to reclaim narrative sovereignty over the castle in order to maintain the fidelity of the world.¹⁵

15. Peterson, *Playing at the World*, ch.1.

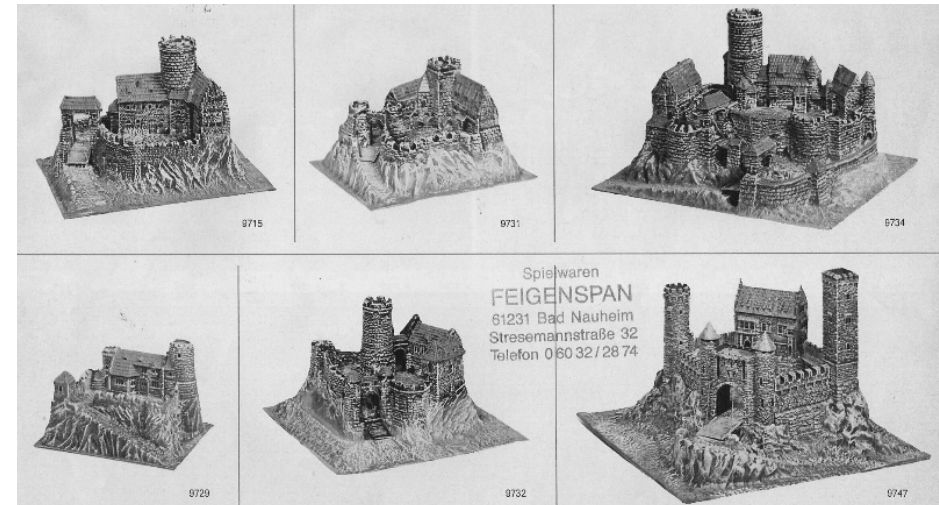


FIG 2.

Archival catalogue images of Elastolin-brand vacuum-formed castles—literally empty Medievalist signifiers, frequently used in Blackmoor, *Chainmail* and modern era wargaming. Elastolin, *Elastolin: Past & Present*, Castles & Fortifications. www.elastolin.nl/pagina110.html

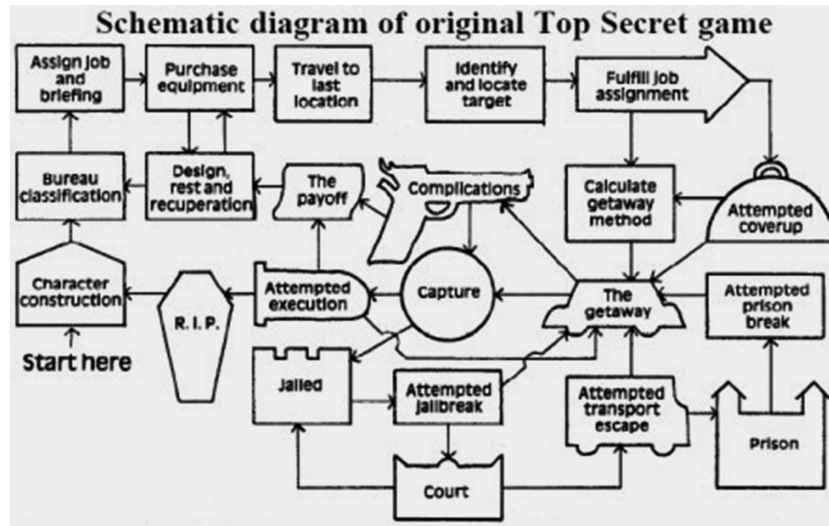


FIG 3. Diagram demonstrating the use of a dungeon structure to plot a spy genre roleplaying narrative. Jeff Rients. 'top secret flowchart' *Jeff's Gameblog*, Suddenly... espionage!, 29 Oct. 2006. www.jrients.blogspot.com/2006/10/suddenly-espionage.html

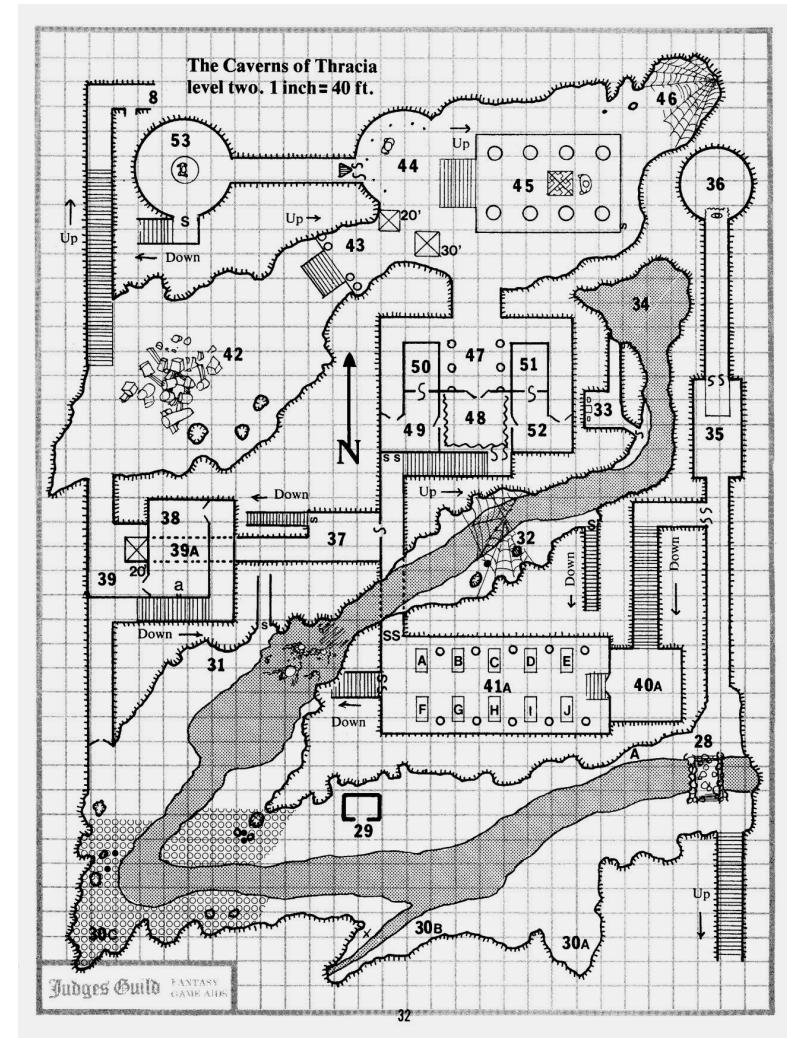


FIG 4. Dungeon map from Paul Jaquays' *The Caverns of Thracia* D&D module, showing a trademark multitude of entry points and spatial interconnections. Paul Jaquays. 'The Caverns of Thracia level two'. *Judges Guild no.102: The Caverns of Thracia*, Judges Guild 1979, p.32

As a conceptual architecture, the dungeon is indelibly a space of ambiguity, interpretation, and potential. It is, as with much of *D&D*, a method of categorisation rather than content. A dungeon does not necessarily have to be an underground labyrinth — it could be a journey through a forest, an interrogation scene or an escape from a crowded city. It is always broken down, in mechanical terms, to a series of interconnected spaces, events or narrative beats, [FIG 3] generated and known privately by the game referee (Dungeon Master) — which are gradually revealed by the exploration of the players. In the decades since the format tunnelled through Blackmoor and into our world, dungeon design has developed into its own theoretical field, with various schools and terms named after famous ‘dungeoneers’ — ‘jaquaying’ a dungeon, for example, means providing non-linear pathways and multiple types of exploration in the style of Paul Jaquays [FIG 4].¹⁶ The sustained emphasis on these spaces feeling like immersive, reactive environments has produced a paradoxical form — both inert, awaiting revelation by the player as a book waits to be opened, and simultaneously active — a mathematically derived ecology of simulated forces and beings that interact with the dungeon irrespective of player behaviour.

This undead architecture, at once still and moving, and like Fisher’s definition of the eerie, at once absent and present, often translates very liter-

ally in terms of dungeon content — most classic dungeon designs outline spaces with complex histories. They translate into sites that have accreted multiple functions over time and display them all at once: an ancient burial cairn is now the hideout of a band of brigands, or giant beasts have dug tunnel nests into an abandoned stronghold. These multi-layered — and laired — environments provide a formal, spatial representation or cognitive mapping of the complexity of eerie subjects — sprawling, complicated structures that intersect with human interaction in unusual ways. The best and most elegant dungeon designs achieve a strange form of poetry. Through suggestions and implications given by their environment, the players slowly piece together the context and history of their surroundings node by node, ultimately enabling them to engage more fundamentally with the fabric of the world [FIG 5]. Like a poem, information in a dungeon is encoded in a way that requires active reading, where the quality, method and affect of reading is intrinsically part of the work — in the case of the dungeon, however, the mechanics of the game system allow this active reading to happen not only outside the text, but within it — a poem where the words change around you as you read. This notion of a systematised, active process of reading highlights one of the unique aspects of roleplaying games; they are texts where the experiential and the structural can be totally flattened, and where very literally the map can also be the territory. As will be detailed later, the application of this to the eerie can

16. Justin Alexander “Jaquaying the Dungeon” The Alexandrian, 23 July 2010, www.thealexandrian.net/wordpress/13085/roleplaying-games/jaquaying-the-dungeon.

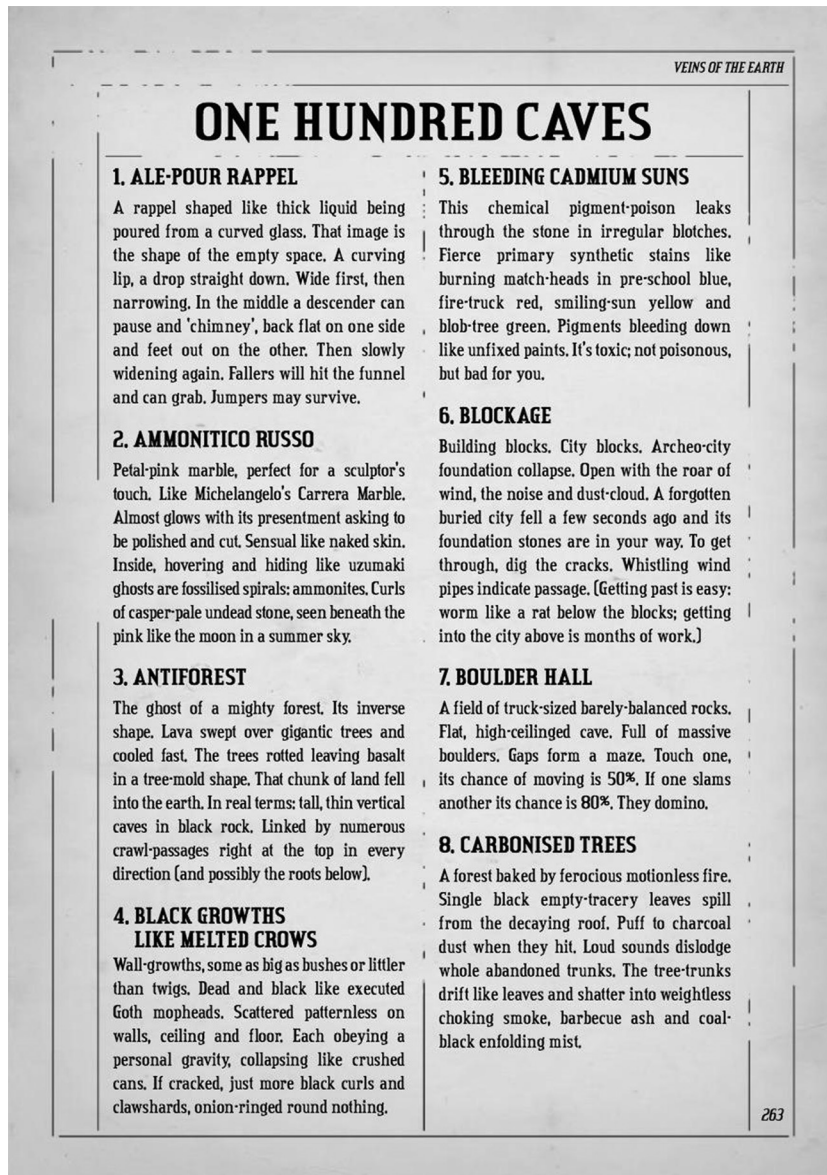


FIG 5.

First page of a random table of one hundred caves, taken from underground megadungeon book made by contemporary D&D bloggers Patrick Stewart and Scrap Princess. This section describes a number of caves within a potential dungeon. Each area also functions as a short, suggestive poem. Patrick Stewart and Scrap Princess, 'One Hundred Caves'. *Veins of the Earth*, Lamentations of the Flame Princess, 2017. pg. 263

be surprisingly straightforward. An eerie experience or entity can be both explicitly manifested within the text of the game as some kind of non-human force, and experientially conveyed through game mechanics that affect player behaviour.

If this comment on the textual quality of the roleplaying game sounds familiar to those with an understanding of videogame criticism, this is not a coincidence. The relationship the dungeon format creates between player, dungeon-master and dungeon is a predecessor of not only the player, interface and algorithms of a videogame, but also the relationship between user, interface and computation in digital computing more broadly. The dungeon master acts an interface or medium, translating the inputs of their players into mechanics and revealing information and consequences in exchange. The dungeon format of periodic, interconnected compartments of information should infer an obvious structural connection to how humans interact with digital technology.

Beyond this structural resonance, the link between the dungeon and the digital is explicit—some members of the computer sciences departments at MIT and Stanford were also participants in the Blackmoor Campaign, and following the huge popularity of *Dungeons & Dragons*, by 1977 there was a new group of hobbyists attempting to translate roleplaying games onto their budding computer hardware.¹⁷ Hoping to replace the refereeing,

17. Peterson, *Playing at the World*, ch.5.

calculation and information storage roles of the dungeon master with what they perceived as a fast, infallible and truly neutral machine mind, students and technicians worked overnight, secretively utilising the spare computing cycles of the university's large, expensive machines, used by daylight for scientific processes. Risking the total deletion of all of their work or reprimands for wasting processing power, the technicians, like the fictional sappers of Gygax's siege tunnels in *Chainmail*, were furtively filling the spare memory of their machines with subterranean tunnels, creating large interconnected dungeons that could be explored by, as with a dungeon master, speaking directly to the machine [FIG 6]. "YOU ARE IN A MAZE OF TWISTY LITTLE PASSAGES, ALL DIFFERENT," spoke one prototype, prompting the user to type in commands in response.¹⁸ The experiments at MIT and Stanford show that the very first digital virtual space ever created was, in fact, the dungeon, and our entire understanding of virtual spaces after this point are defined by this.

While the legacy of these experiments with regards to videogames is clear—contributing to the ubiquity and banality of the fantasy genre within any given gaming format today—this development is also relevant due to its impact on development of computer interfacing. We currently relate to these non-human modes of cognition by accessing pockets of information through dialogue - exactly as we relate

18. Dennis G. Jerz "Somewhere Nearby is Colossal Cave: Examining Will Crowther's Original 'Adventure' in Code and in Kentucky," *Digital Humanities Quarterly*, 2007, www.digitalhumanities.org/dhq/vol/001/2/000009/000009.html.

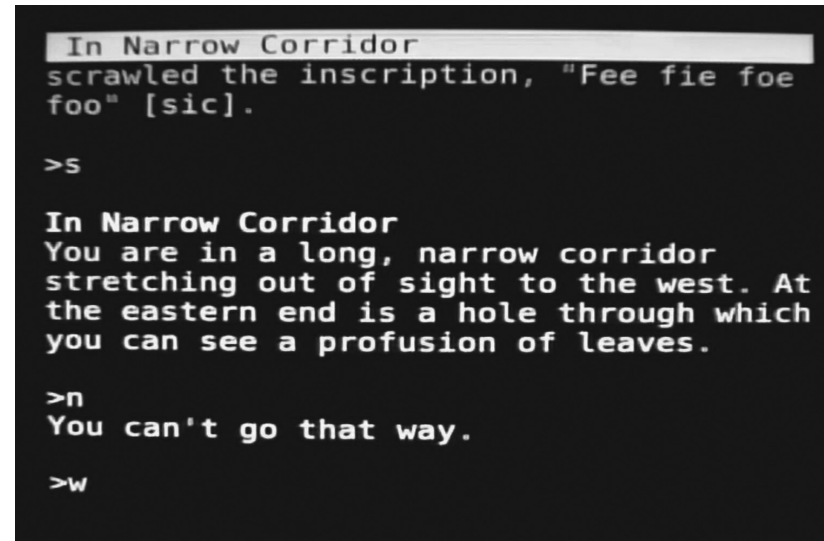


FIG 6.

Still from an online play-through of William Crowther's 'Colossal Cave', the first text-based adventure and one of the earliest virtual spaces. Glade Swope, 'Colossal Cave Adventure play-through'. *YouTube*, Jan. 19 2016. www.youtube.com/watch?v=O3etkSoHrR8 (video still)

to a dungeon. The architecture of a file structure or web 1.0 site mirrors precisely that of a *D&D* dungeon design—these are all hypertexts, database narratives—and it can be claimed that the dungeon of Blackmoor Castle provides both the original hypertext and the tools for reading it. This is significant to an engagement with the eerie, not only because of its legacy and implications regarding simulation technology, but also because our contemporary human relationship to computing is, albeit being nascent, rigid and highly proscribed, imminently adjacent to the much wilder notion of having a relationship with the incalculably complex and malleable systems that comprise eerie entities.

The dungeon is a labyrinthine embassy for the eerie, giving architectural form to Medieval fantasy. It presents the final, key component of the success of the original *Dungeons & Dragons*—a referee driven storytelling game in which players take on roles of individuals, exploring and adventuring in indefinite spaces that allow them interactions with otherworldly beings.

Mechanically, *Dungeons & Dragons* contains a number of tools significant in their construction in relation to Medievalism, and, as technological mechanisms, are thereby potentially extricable to approaching eerie entities more generally. In the following section, the most significant of these devices will be detailed, including, where possible, their non-*D&D* origin or application in order to begin to see how they might

pertain to communicating with eerie entities beyond just the Medieval.

As has already been noted, *D&D* relies on the concept of simulation—its system of rules function as a model of certain characteristics relating to a combination of the physical laws of reality and the genre conventions of fantasy fiction, which are then operated over time by the players. The science of simulation began its contemporary ascendance during the same period as the *kriegsspiel*—the growing use of statistics by newly unified, modern states naturally feeding into their military technology through the concept of probability. It is hard to underestimate how radical the notion of using statistic-informed chance both in game play and the burgeoning field of probability theory was at the time. To illustrate, Rieswitz, the creator of the *kriegsspiel*, was compelled to design a playing dice so visually distinct from a conventional one that not even the slightest association with gambling would be possible—the sinful pursuit of luck being the only conceivable use for random chance before the invention of probability.¹⁹

As a product of the Enlightenment and the nation state, simulation, probability and statistics are of course open to the same criticisms—something far too large and well-trodden to detail here. It is perhaps in the critique of high modernity through urban and cultural planning, where statistics and probability were specifically used as tools for designing new, complex environments, that a more specific

19. Peterson, *Playing at the World*, ch.3.



FIG 7.

Wargamers at the RAND corporation circa 1950s, a dark void under the table. The RAND Corporation, 'The Serious Role of Gaming at RAND'. *Rand Corporation*, date unknown, www.rand.org/multimedia/audio/2017/03/23/the-serious-role-of-gaming-at-RAND.html

analogous critique of simulation can be read. High modernism's disregard for locality and organic interaction and its emphasis on standardisation and legibility can equally be applied to the concept of simulation.²⁰

To expand on this, another experimental military simulation by the RAND Corporation provides a useful example — *Towards a Cold War Game*. In the late 1940s, the Social Science Division at RAND, most of whom were war gaming hobbyists, were tasked with formalizing political and financial factors into a mathematical system susceptible to their existing methods of analysis — essentially expanding the original notion of the *kriegsspiel* outwards to encompass the wider implications of warfare [FIG 7]. Every attempt, however, to systematize these abstract political factors introduced unsatisfactory levels of simplification — there was no possible way of developing a rigid system that would account for the complexity and specificity of politics. Ordered by the U.S. government to create a system for communicating with the eerie entity of global political dynamics, the SSD managed only to create incomplete and static depictions. Following these failures, the scientists turned to more experimental, socially oriented methodologies partly inspired by the political wargame *Diplomacy*, which contains no dice rolls or chance. The result, *Towards a Cold War Game*, pushed *Diplomacy*'s mechanical minimalism even further: containing no systematic mechanics whatsoever, the

20. James C. Scott, *Seeing Like A State* (Yale: Yale University Press 1999) p.4.

game simply involved the players assuming the roles of different parties involved in the Cold War and taking turns submitting written moves of any kind of a panel of judges who would qualitatively assess their efficacy. The value of *Towards a Cold War Game*, therefore became not about creating a high-modernist and mathematically precise, standardised model, but rather to channel the qualitative expertise and knowledge of the players and judges into an iterative process where potential events might be played out.

D&D and its descendants take this qualitative simulation further by, as detailed above, attempting to provide a simulation framework for the consciously unreal. The data both inputted and outputted from the simulation is highly interpretive, intending to be a generatively random framework rather than a prediction of events. As with the intricate systems of the real world, there is also an upward limit on human comprehension of complexity within roleplaying game design. This is evidenced by the attempted *D&D* successor, *Chivalry & Sorcery*, which boasted having a vast advantage over the original by adding a far more detailed and comprehensive system of mechanics to the basic game—providing calculation models for increasingly minute actions the players might take. However, despite being praised for its thoroughness and accuracy, its players, lacking the black box calculation of computing, eventually gave up on *Chivalry & Sorcery* for being restrictively complex,

favouring the more simplistic but interpretive rules of *Dungeons & Dragons*.²¹

This interpretive system is important to contending with the eerie—by creating a subjective simulation, it is possible to outline *genre*. In combining multiple fantasy elements into one systemic model in *Chainmail*, Gygax formalised the fantasy genre into a series of adaptable tropes, creating an accessible fantasy DIY kit that lowered the bar for entry by the audience.²² Once something is defined as genre, it is visible: it can be named, criticised, modified and held in the hand. Gygax's process of amassing and converting myriad fantasy elements into one system is now the standard procedure for roleplaying game design. Games oriented around science fiction, horror or romance all seek to mechanically formalise the characteristics of those literary tendencies into a recognisable system adaptable by the player. In the context of the eerie, this process can be extrapolated from the imaginary to the real—*D&D* provides the formal outlining of a certain kind of Medievalism. When this idea is expanded beyond its Medievalist roots, the creation of interpretive models formalise tropes of other complex and invisible eerie entities—capital, for example, may not allow a high modernist universal control system, but a kind of relational cognitive mapping. Then, a model might be created that allows complexity to be tangible and malleable without needing to be entirely com-

21. Peterson, *Playing at the World*, ch.5.

22. *Ibidem*, ch.4.

prehensible. In other words, an entirely algorithmic system may not allow interaction with the eerie, but something that combines the interpretive model of *Towards A Cold War Game* with the structural representation of the dungeon, just might.

A useful classification here can be drawn from the traditional, literary use of the eerie: the supernatural. A less allegorical school of supernatural thought proposes a distinction within contact with the otherworldly: depiction and invocation. It may eventually be possible to create a very accurate mathematical simulation of an eerie entity despite its complexity—as is done with, for example, weather prediction—but in supernatural terms, this would merely be a depiction; a static representation of a limited model, open to many of the same failures as high modernism and the initial experiments of the RAND corporation. An interpretive, genre-forming simulation may allow for a tactile, human scale interaction and is something closer to an invocation—inferring a kind of visceral, embodied dialogue with the entity through possession, conjuration or command.

To conclude this section, it is interesting to note that interpretive simulations have a history of communicating directly with eerie entities—in the play-by-mail wargames of the 1960s, players struggled to find a fair method for using randomly generated numbers—the outcome of a dice roll by someone in Illinois being completely unverifiable as truly random by someone in Minnesota. Eventually, they settled on a nationally recognised standard of veri-

fiable chance: The financial market. Many play-by-mail game mechanics were redesigned in order to use a system where shares of a chosen stock traded on a particular date served as the surrogate for a dice—as if the invisible hand of Adam Smith were rolling it.²³ In this we might see the much larger and complex entity of capital passing us by, tantalisingly adjacent to the budding roleplaying game system, like a blue whale passing above a deep ocean probe.

The next technology that *D&D* provides is interlinked with its simulation—its use of taxonomy. As game historian Jon Peterson says, “a game cannot model combat with an orc if an orc might equally well be a whale, or a blind giant, or three-headed, or simply a goblin.”²⁴ To that end, Gygas began a process of classification that reached fruition with the publication of the *Monster Manual* in 1977—a statistical grimoire of entities for players to interact with. In order to function within the rule set of *D&D*, players necessarily had to conform to a basic universal set of mechanics. Indebted to Tolkien’s addition of clear racial specificity to the previously amorphous creatures of folktales and myths, Gygas created a modular taxonomy of beings drawn not only from fantasy tropes but also from ancient myths, fairy stories, Hollywood cinema and a bag of plastic toys from Hong Kong. By classifying these creatures, the *Monster Manual* definitively linked the names of

23. Peterson, *Playing at the World*, ch.3.

24. *Ibidem*, ch.2

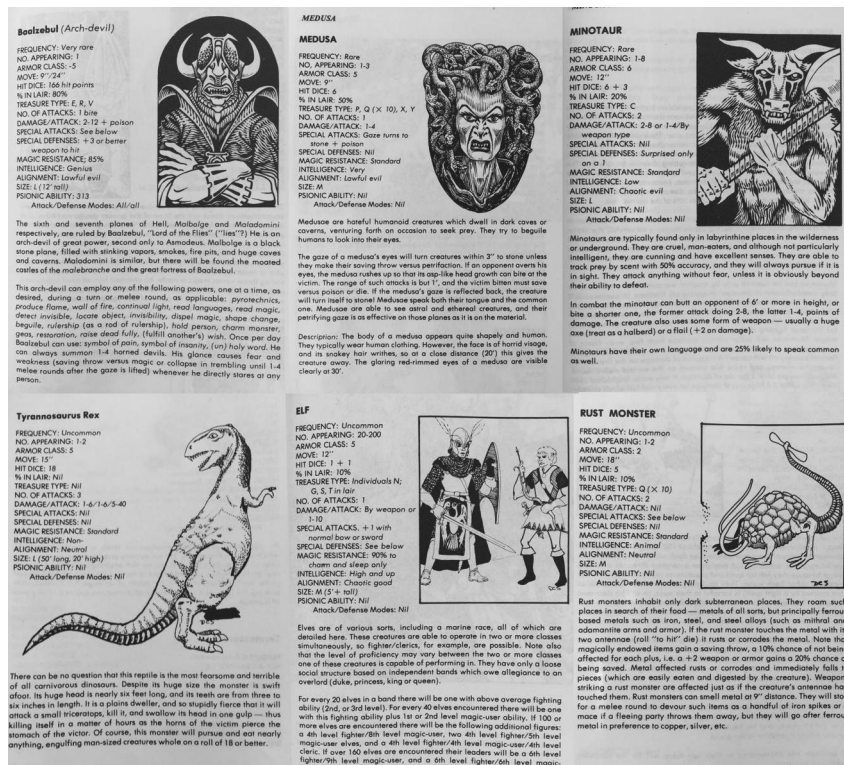


FIG 8.

Composition of various monsters featured in the original *Monster Manual*, deriving clockwise L-R from: Christian Literature, Greek Myth, Palaeontology, Tolkien and a plastic toy from Hong Kong. Gary Gygax with David C. Sutherland III, D.A. Trampier, Tom Wham and Jean Wells. *Monster Manual*. Lake Geneva: TSR Games 1977

monsters to particular physical characteristics and behaviours, establishing a widely understood baseline of classification that still fundamentally persists in popular culture.²⁵ Due to its influence over the fantasy genre, even those without direct exposure to the game are likely to have a passing understanding of the characteristics of orcs and goblins which will be as much informed by *Dungeons & Dragons* as they are by Tolkien and earlier fables.

Additionally, through forcing these disparate beings to conform to a basic set of distinctions, a kind of mathematical ecosystem was forged. A leprechaun, a hydra, a dinosaur and the prince of hell could all be posited as existing on the same plane of equivalence, with a system in place to indicate the consequences of their interactions [FIG 8]. This approach is typical of *D&D*'s tendency to formalise categories rather than contents. Once the distinction of player class, species or monster type is established, it becomes very straightforward for the user to make their own additions based on these classifications. Ultimately, the *D&D* system is infinitely extendable, but still narratively cohesive.²⁶

Through its use of modular categorisation and emphasis on narrative, *D&D* conducts a kind of re-mooring, although not by attempting to reverse the process of Medievalism and re-attach the Middle Ages to its historical context. Instead *D&D* formulates tropes of the Medieval into a consistent

25. Peterson, *Playing at the World*, ch.2.

26. Peterson, *Playing at the World*, ch.5.

taxonomy that uses a basic, interpretive system of storytelling defined by the relationships between categories. Unlike factual, historical contextualisation, this approach maintains the plasticity of the eerie Medieval, but, like the interpretive simulation, ratifies relationships between its characteristics. *D&D* refills empty referents, like the void in a vacuum-formed castle being tunnelled through with interlinking dungeon corridors.

Within a year of *Dungeons & Dragons* being released, a slogan began reverberating through the various fanzines of the war gaming community: “D&D is too important to leave to Gary Gygax.” Gygax had very quickly lost control of his creation. By 1976, it was nearly impossible for his publishing company to legally distinguish between home-made alterations, unlicensed anthologisations, entirely new game systems or outright pirate versions of the game. Their offices received an unmanageable deluge of fan-made content whilst the thriving DIY wargaming community happily modified, incorporated and redistributed their own additions to the game system.²⁷ This anti-authorship mantra, while obviously not a desired outcome for Gygax, is indicative of a certain kind of viral success the game had — made possibly entirely by its interpretive system — which, as detailed above, gave primacy to categories over specific content, allowing for a modular expansion of the game’s core systems. While later iterations of

the game presented a unified, copyrightable fantasy realm in the style of Tolkien’s *Middle-Earth*, incidentally based on Arneson’s Blackmoor campaign, Gygax’s initial rules were as noted, a kind of fan agglomerate which required the individual referee or Dungeon Master to shape into a cohesion of world building and significantly, a style of gameplay suited to their specific player group. No stranger to autonomous, open-source production from the wargaming days, the hobbyist community created not only myriad variations and additions to *D&D*, but also planted the seeds of many other roleplaying games that followed — *Dungeons & Dragons* becoming as much a movement or format as a single intellectual property. This collaborative generation persists in contemporary roleplaying primarily through online blog communities — Dungeon Masters post their own gameable content for others to implement in game sessions in an autogenerative, kaleidoscopic feedback loop. It’s possible to take, for example, the world-building concepts from one blog author, a mechanic for diplomacy from another, and a random generator table of ancient curses from a third, and allow these elements to organically intermingle through exposing them to a group of players, ultimately feeding the results back to the original authors. The formal structure of the dungeon very clearly demonstrates this open-source user modularity — the architecture of one dungeon can be made up of rooms designed by many different authors. Beyond this providing a further distinction between

27. Peterson, *Playing at the World*, ch.5.

the interpretive modelling of *D&D* and the universal standardisation of the empirical simulation, the autonomous communal volition and collaborative content generation provided by roleplaying hobbyists presents a method for reconciling multiple subjectivities into a single cohesive system. This is vital for contending with the eerie. If, as this text proposes, interpretive simulations are preferable to standardised simulations for invoking abstract entities, these user-determined interpretations of an eerie force will obviously all differ, not really offering any advance on the total formlessness and plasticity of the original abstract entity. By providing a modular framework, *D&D* allows these subjective interpretations to not only co-exist, but actively integrate—invoking the eerie may prompt us to all build separate rooms, but the dungeon allows them to coexist as one architecture, and for a narrative to inhabit and animate them.

The importance of human interaction and interpretation is crucial in holding together this modular system—unlike their computerised descendants, these games use humans as a vessel—the collective willingness of the players to create a cohesive narrative filling in the absences or discrepancies of the system. In this way, it is possible to see the game system itself having a kind of agency autonomous from the intentions of the players. Perhaps the easiest analogy would be the Ouija Board—a tool for automatic writing or spirit communication which is currently produced and sold by boardgame publish-



FIG 9.

A 1970's U.S. advertisement for the Ouija board, positioning it as both a boardgame and a method for seeking ghostly advice on love, money, school and travel—all potentially sites of the structurally eerie. Famous Parker Games, 'Ouija's Weird! Ouija's Wonderful'. *The Occult Museum*, 'The Mysterious History of the Ouija Board'. www.theoccultmuseum.com/mysterious-history-ouija-board/

ers [FIG 9].²⁸ By each participant placing a hand on the planchette of the Ouija, its movements and the words they spell out are purported to be the voice of spirits—this claim can be made as the movements of the planchette do not belong to a single individual, but the collective motion of all the hands in play. This unconscious collaboration works in exactly the same way as the willingness for narrative cohesion in *D&D*, and has the potential to, like the Ouija Board, allow spirits to gain agency through the collective will of human participants.

So far I have illustrated how certain technologies derived from *Dungeons & Dragons* can create a system by which eerie entities can be invoked, given subjective form, and granted agency through human collaboration. Once the entity is invoked, there is one final technology that allows us to speak back to it—the act of roleplaying.

As with much of *D&D*, the notion of roleplaying entered the game completely incidentally and organically, despite ultimately becoming specific enough to define an entire genre of gaming. In the pre-*D&D* wargaming period, players often adopted the characters and tactics of historical and fictional generals to add flavour to their games, further immersing themselves and avoiding the stale repetition that simply playing a game as mechanically successfully as possible would eventually provide. As

detailed in the account of Blackmoor campaign, the invention of the dungeon incentivised players to cast off their armies and continue as individual adventurers, meaning they would return to inhabit the same character periodically throughout the campaign, were less concerned with balancing the numbers and managing the mechanics of their forces and more occupied with their individual narrative journeys. Jon Peterson defines a spectrum between two types of voice within a roleplayer: the *immersed* voice and the *detached* voice. The immersed voice is diegetic, emulating the kinds of speech and behaviour that fictional entities within the fantasy itself might make, while the detached voice treats the game as a game rather than the fantasy that it models. Where players sit on this spectrum depends not only on the specifics of the game system, the playstyle of the dungeon master, and the individual proclivities of the players, but can also continually oscillate at any point during a game; a player conversing in-character to a creature portrayed by the dungeon master can immediately detach, zooming out and speaking to the dungeon master as a player to clarify a rule or suggest a mechanic before again switching back to her immersed voice.²⁹ Returning to the analogy of the Ouija board, the paradoxical dual-voice approach of *D&D* translates as both accepting that the planchette is being moved by the hands of the players, but also a willingness to, despite this knowledge, immerse oneself in the premise of the Ouija being a genuine method of com-

28. "Ouija Game," Hasbro, www.hasbro.com/en-us/product/ouija-game:86117134-5056-9047-F5E1-46EB2553A56A.

29. Peterson, *Playing at the World*, ch.4.

munication with spirits. This fluidity of diegesis and conscious suspension of disbelief provides a powerful tool for communicating with the eerie — like performing a ritual, a participant can recognise that they may be taking part in something absurd, speculative or fantastical, and yet still fully immerse themselves in the act. In such instance, both a detached view of the system and its immersed human affect can be experienced — as Mark Fisher says of the eerie, the outside can be seen from the inside.

Roleplaying's mechanical role is intrinsic to the type of interpretive simulation proposed in this text as a method for interacting with the eerie. While roleplaying has its own roots and relevancies in therapy, theatre and pedagogy, its incorporation into simulation technology and consequently game design began in the 1950s with the aforementioned tale of the scientists experimenting at the RAND corporation. With *Towards a Cold War Game*, roleplaying became implicated in simulation technology in the same way as probability: through military research. Both the participants in the game and the panel of judges who assessed their moves were required to operate simultaneously in the detached voice, weighing political cause and effect from their own expertise, and the immerse voice, considering the individual responses of their respective roles relative to the new historical circumstances being generated. In this way, it was perhaps one of the first uses of simulation technology that could communicate directly with an eerie subject.

To expand on how this 'channelling' might work in the quite literal sense of direct communication, the roleplaying podcast *Friends at the Table* provides the closest possible example. Posited as a 'critical world-building' podcast, each season begins with the participants discussing what kind of narrative they want to tell, what sort of environment they want to inhabit and what topics they want to address. The show runner and dungeon master, Austin Walker, then formulates this input into the world-building for a roleplaying campaign, which is then played out and recorded over hundreds of hours and a deep emotion attachment to the characters, moving between different game systems to suit different scales and types of story that happen within the world. Specifically to *Friends at the Table*, large and complicated topics of queer identity, cultural appropriation, political accelerationism, transhumanism and ethics of technology are imbued within the world-building and are tackled both directly by the immersed voices of the players through their characters, but also more abstractly by their detached voices discussing aspects of the world-building.³⁰

Curiously, in addition to this folding in of complex and abstract ideas, many of the scenes that play out in *Friends at the Table* involve communicating with diegetically eerie beings. Whether playing in a fantasy or sci-fi setting, the players often find themselves making deals with ontologically incomprehensible entities — undying, all powerful gods, history erasing spirits, or impossibly advanced artificial

30. Austin Walker, *Friends at the Table*, www.friendsatthetable.net.



FIG 10.

Composition of fanart depicting gods, spirits and other non-human intelligences generated by the roleplaying narratives of the Friends at the Table podcast. Various artists, 'Counter/WEIGHT and Heiron fanart', *Counter/WEIGHT*Wikia, 2015-ongoing, *The New Archives Wikia*, 2014-ongoing. http://counterweight.wikia.com/wiki/COUNTER/Weight_Wikia, http://thenewarchives.wikia.com/wiki/The_New_Archives_Wikia

intelligences — all speaking through the immersed voice of Austin Walker, but living through the collective will of the players and given visual form through community fan art [FIG 10].

If the emphasis here on the simulation model having an organic, inhuman agency and its own, somewhat randomly generated accretion of complexity and plurality sounds similar to the description of an eerie entity itself, this is entirely intentional. The use throughout this text of anecdotal stories of slow, incidental developments in culture and technology, functioning both as the link between the Medieval and mechanics of *D&D*, but also as the evidence of the uncanny intrusions that precisely define an eerie entity, aim to highlight that, in order to commune with the eerie, we must take on some of its aspects. In this way, the interpretive models proposed by roleplaying games should be encouraged as a kind of spirit guide or companion species, self-domesticated eerie entities, like cats unto lions — cats, of course, can traditionally perceive ghosts. The freedom and autonomy of evolution of these models is vital in order for them to truly connect with their larger cousins, rather than suffering the fate of the stunted, failed early game systems of the RAND corporation. Dungeons must be allowed to continue tunnelling themselves, extending siege corridors to and from eerie entities and eerie experiences.

Returning, however, to Mark Fisher's definition, by communicating through interpretive simulation models we may better 'see the inside from

the outside' and begin to understand the ecological dynamics between human and abstract forces and the where the weight of agency lies.

To conclude, perhaps the structural form of the dungeon and the practice of dungeon design, or 'dungeoneering' provides a useful vocabulary for collecting these methodological notions. Within the roleplaying community, 'dungeoneering' refers to both designing dungeons, but also the skill in-game characters might have in order to successfully navigate them; providing a term that incorporates both the distanced and immersed voice, and conflates model-building and exploration. With regards to the dungeon itself, it is an interdisciplinary form that incorporates, generates and hosts narrative. In its very construction it flattens factual and symbolic forms — interpenetrating tunnels and chambers that contain and syncretise knowledge. Its designs can be easily distributed and quickly modified; rooms can be added, or two dungeons can be connected. It is not only a cognitive map but a cognitive territory of things labyrinthine and dread-inducing, and yet it still provides a key. It exists only to provide human interaction, but is designed to have its own agency separate from its human users. It is paradoxically a system, a story, a space and an organism. Fundamentally, dungeons are living embassies — places where the human and the eerie may meet on neutral ground.

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FATE WORK, A CONVERSATION
VALENTINA DESIDERI
AND STEFANO HARNEY

[SH] Let's propose that what we are calling 'fate work' arises as a potential practice in the face of the way work today is said to determine our lives. It is very common in the scholarship on work today to say that no matter how we try to strategise our way out of capitalist work in favour of other forms of working together differently, in favour of another world being possible, being present, we find that the regime of work uses this strategy of resistance against us. So if we criticise capitalist work, this regime makes it cool to be cynical about work at work. Or if we seek meaning away from work, this regime invites us to find meaning, find authenticity, at work. If we seek other ways to live cultural or sexual difference, this regime encourages us to bring this difference to work, to put it to work. Let's call this 'work fate.' This kind of work fate is notoriously the one found in the Boltanski and Chiapello book, *The New Spirit of Capitalism*, but also the one that dominates critical management studies. This work fate also leads of course to the strategy of trying to escape work through entrepreneurship or financial investment. But in either case, the case of resistance or the fantasy of escape through 'embracing your dreams,' what work fate provokes is strategy. And what strategy proposes is that the future can be determined now, that it can be, whether good or bad, whether another world or more of this one, made singular and worked toward, predicted, managed, hedged. And it is not just the fantasist who strategises. He who resists also tends to resist strategically. This is perhaps because work fate appears to us so

obviously now as a strategy deployed against us, all of us, and all parts of our lives, that it provokes in us this strategic reflex, a strategic reaction, this tendency to want to fix the future in both senses of the word fix. Knowing we are strategised we nonetheless try to strategise our way out.

[VH] Maybe that's because the future has fixed us, or better our current relation to the future has fixed our notion of work. Under capitalism the future is an open field ahead of us that we can shape and construct through our work. Since we're condemned to have a future, we're condemned to work, and at the same time, if you are condemned to work, you are condemned to have a future. So if you want to realize your dreams you have to work (always assuming that those dreams are something that belong to a future scenario and not the present one). If you want to avoid work, you have to work as hard because you have to find a way, you have to have a plan, a strategy. Whatever you choose you will be working and you will be acting strategically, towards a goal and therefore you'll be productive. In order to change this dominant fate that wants to control the future, and therefore stays in the realm of the known, you have to sabotage this double machine of work and future so that it stops functioning for a while and that a space is opened up (a present) and later, the future will come. One way to sabotage can be to refuse strategy.

[SH] Yes I agree and this raises immediately two questions. How would one refuse strategy or even as you say sabotage it? Is it possible given that we are ourselves so thoroughly strategized? And what would come to stand in the place of strategy, what would emerge? I think that we can say the question goes even beyond the governmentality of strategy and tactic, of individuals and populations, explored by Michel Foucault. The question is also one of our very form of thinking. This thinking arises not just from the interventions of governmentality but from our habit of abstract thought, a habit we inherit, as Alfred Sohn-Rethel puts it, from our practices with the commodity form, practices that have us acting as if abstraction comes before practices, before our materiality, abstractions that rule over our materiality. Strategy is possible only where this kind of reasoning reigns. It is an abstraction of the future that is then said to be put into practice, and it is for this same reason that 'in practice' strategy generally fails or has to be constructed afterwards as a story. This not to say that strategy does not strategise us, nor that this is a matter of ideology. It is there in our daily compulsions of work. But it can of course never deliver. So the thing to ask is, can we sabotage strategy by developing a practice that does not know the future ahead of time, but works at it nonetheless, which is to say, it is not without its own intention.

[VH] Yes, strategy and intention are very different. To have a strategy is to have one fate or future

we envision and that we try to realise, while to have an intention means to start from the present and stay there while the future anyway happens and fates (many) unfold. If for example we set an intention 'to work together' maybe we could just continue writing and see what it produces and how it happens. Maybe it means that we need to stay sharp and sensitive in recognizing the 'work' that emerges, in the present, rather than finding a way to produce the desired work. It's different from having a working method. A collaborative writing method in this case would be a strategy, an example of what we are naming work fate rather than the fate work we are proposing. Fate work could be better understood as a practice, which of course can involve tools and specific ways of using them, but that are never prescriptive, they never guarantee any result and that ultimately let the writing (or any work) emerge from the actual doing of it. An intention is not some kind of wish for the future, on the contrary it operates and changes directly the present. The moment you set an intention of doing something you assume that in a way you are already doing that very thing, just have to find out how. This also mean that there is no right or wrong way of doing something, a more or less valid practice in principle, you can just experiment with them, but with no claim of truth or attachment to its results, visible and invisible ones. Thus to set an intention is to open up a space for practices that can be generative of different and multiple futures or fates in the present. In this proliferation, the truth claim of the

right strategy is swept away. In a way it already works this way with strategy, since strategies keep failing and we keep trying them, only we always readjust the narrative at the end to make the experiment somehow succeed (or not succeed but according to known parameters).

[SH] And bringing the future into the present has long been the ambition of the Left too, but at the same time this has been also a strategic move. It has too often involved a programme, a leadership, a unity in the face of the future, a unified future, even if we can understand how these 'strategies' were provoked in response to the brutal abstractions of capitalism. But as you say, developing a practice that proliferates fates, generates futures, can perhaps cause the future to lose its authority, which is to say to lose its abstraction, to come into the present as sensation as something susceptible to the senses and something that in turn works on those senses in the present. I mean this in the most concrete way. So let's think about popular fate work, because fate work goes on all the time even if the impulse in this popular fate work appears at first to work fate, to produce a new destiny, to replace pre-destination, or to find 'the truth' of the future. Let's think of the tarot card reader, the palm reader, the village seer, the one who throws the bones. Of course for each person who is read, this fate work is designed to secure, change, or see a fate, restore the future, but the constant practice of this fate work has the opposite effect. It produces more

and more fates and even for the single person having her fate told, repeated readings generate fates rather than holding one steady. But more than that, there is a confusion that takes place in the reading of fates between determination and self-determination, a confusion that undermines strategy. What I mean by this is that strategy depends on a self-determined subject positing an abstract future and then overcoming the forms of determination that stand between him and the future, or in the case of much work fate, the positing of the impossibility of overcoming the forms of determination because strategy itself becomes 'strategised.'

(Work fate we should remember can be as skeptical of strategy as we are, but for opposite reasons of course. As we have suggested it can use a kind of cynical anti-strategy without really exiting strategy or even embrace a true pessimism that fastens to one bad fate when it rejects strategy as inadequate to that very fate.)

But when one accepts a tarot card, one immediately accepts that the self is part of a kind, a set, and at the same time, that determination has gone into the hands of the reader, becomes part of the practice of fate work. So we have a kind of undermining of the premises of strategy, a bit of sabotage. In other words, it seems in these popular practices the subject of strategy gives up his position, and determination also yields to a reading, to an interpretation that undetermines it.

[VH] If the future loses authority, how can we then relate to social and political change? We cannot hope anymore in revolution since it heavily bets on change in the future (after the violent moment of revolt society will change, it often refers to the 'post-revolutionary society'). Now the idea of insurrection is pretty fashionable, the scenario of an irrational, non-organized, diverse explosion of violence against the system which will inevitably bring change, but how? Although much less future-oriented than revolution, insurrection (this moment of almost pure revolt) is also expected to bring forth change as a result of the physical experiencing of it, almost as a moment of magical transformation. It is sure that to go out and smash things is an exciting, beautiful and healthy thing to do, but who would like to live in a completely chaotic world where violence reigns in the streets for more than a couple of days? And what kind of change will it bring apart from more, and now better justified, violent state repression? And here the question of working a proliferation of fates as opposed to having a strategy for the future, is fundamental. Both revolution and insurrection are, even if in different ways, strategies for a future while fate work is to go for practices that will start to make us live differently now and violence is there to be used against anything that impedes us to do so—even against ourselves or the symbolic (and non-symbolic!) order to which we give authority—and not just indiscriminately, hoping that it will change us for the best, or at all.

What it is to set an intention of radical change and just be busy with that, with practicing that now, instead of projecting it into the future? How do we start to live differently now? The sabotage we were mentioning earlier can be useful here. Mutual self-sabotage could be a practice to develop, a practice that is inherently complicitous as it has to be done with others (and other things—like a *sabot*) and that by interrupting the machines at work, creates unregulated time and space, or at least a pause, a moment to be together. In this way sabotage can be a way of practicing co-determination, of unsettling each other, thus opening oneself up to co-determination while becoming more perceptive, since in order to sabotage, you need to be able to perceive the rhythms of the machines at work. You need to become a present reader, a reader of these abstract machines, and you throw a shoe in the middle of them. So that many fates can open up.

[SH] Yes I think one interesting result of fate work as co-determination is that it precludes the idea of a common fate in the future. To enter into fate work together means that what is common is what is now, not what will be in the future. In fact we could even say that it reverses the idea of a common future, starting from a common present and through co-determination makes different fates together, produces different fates, different futures in the present. In this sense co-determination in fate work could be understood as what Paolo Virno calls 'developing a philosophy of the preposition 'between' to understand

human nature. But for us, it is not just human nature or human fate. But rather we start with what we call the practice of complicity, where the accomplice can be human for some complicities but non-human for others, and between the non-human too.

One way to think about complicity, about the way we are already in a 'conspiracy without a plot' with all around us and all in us, is through the reading accomplice. Not every reader of fate can be said to be an accomplice. Especially a reader who claims authority, does only one reading, or returns always to the same fate. Such a reader is not an accomplice. But the reader who reads new fates again and again, is read by and through new fates again and again, who through the sustained act of reading again and again offers a kind of love, love because this is the word for helping someone to make fates, to generate and proliferate fates. Such a complicity of love can do two things. It can help someone avoid the full mix of self-determination and determination that strategises every attempt at self-organisation today, that assaults every singularity. It does this because this love of the accomplice takes place in superabundance, even if from the edge, even out of sight. There is always a co-determination that prevents determination from becoming individual, and it is a co-determination not of reciprocity but of mutual superadundance. And such a complicity can also open someone to the depth and breadth of the conspiracies already under way amid her being, amid the beings in her midst. As such a practice unfolds, it is commonality in the

present that is enriched, generated, and the future disappears as an obligation or authority, and yields to the difference of the present modes of living. Thus commonality in the present changes in the presence of the fates proliferated from it, or in other words the common is always becoming another common through fate work, through the self-organisation it permits, organisations of the common that may also be called fates in the present, accomplished by the proliferation of readings, of fate work.

[VH] If we start from what we have in common now, one thing for example is debt, but politics continue to work fate on it. We have a present situation, debt, that has to be 'resolved' (always in the face of the future of course). Whatever the ideology or party, there is a future that politicians envision for which they are trying to find a strategy, be it the future vision of the debt repaid or the vision of the debt cancelled. How can it be approached differently? What's before debt and in debt? Can we be present readers and generate a proliferation of fates and practices that can allow us to be in debt experimenting with what it is, finding ways to practice debt otherwise?

[SH] Right. In what ways would these kinds of readings make debt a mechanism for deepening co-determination? If debt is the way we are currently told we ought to relate to each other in the future then to work the future into the many readings of fate in the present, to do fate work, makes debt into

something present as mutual readings, brings debt and work back together in the service of commonality now, a commonality that is already here and with practice can allow for a co-determined proliferation of self-organisation, of fate work, of fates here in the present. I can never repay nor would anyone ask me to repay nor could anyone calculate a debt in the present, but to know that such debts prepare the way for more readings, more fates, is to know debt as co-determination, as the sabotage of the future, not its predetermination, not its strategic premise. This is what you and I mean, I think, by bad debt.

So we might say that the problem with popular fate work is not that it is based on superstition or that it has its own abstractions, and anyway whatever abstractions it has are less stable than in the proper realms of strategy. I think we would say that the problem of popular fate work is that it is not popular enough, that even here something equivalent to an anti-psychiatric movement is necessary such that popular fate work becomes open to all as readers as well as those being read, in the manner that you insist on for your practice of 'political therapy' for instance, where anyone can become a practitioner, a therapist. This possibility of expanded practice requires that the way readers are chosen, apprenticed and initiated be opened up. How could we provoke this possibility? For me, your practice of political therapy is so revelatory here in the way it confronts the realm of politics which after all overlaps the realm of strategy

closely in both its abstractions, its intellectual history, and its hold on 'self-determined subjects.'

[VH] It's possible to open up how the reader is chosen once the authority of the reader is undermined. I'm no political expert whatsoever, so political therapy only creates the possibility to develop other languages to talk about and do politics. There is no discipline, no specific theory behind it. It's a practice that develops as it happens and continue happening, in between the people involved, the vocabulary used, the sensations, the experience it brings forth and so on. Nor the therapist nor the patient is responsible for any kind of 'solution' of the problem. The problem is rather treated as an occasion for language to develop, for speculation to happen and politic to be felt.

[SH] Another aspect of your political therapy practice that is crucial is that like popular fate work, it happens between two. Your practice provokes the question of how readings might be multiplied both between two and among many. What this suggests is that we can never intend to practice fate work by ourselves, even if a change in something like 'ourselves' is what we look for in the opening to vulnerability produced by fate work. Not only is the proliferation of someone's fate from the beginning a collective project but also that the presence of the other in the fate of the one means the one is already not one, the self is not self to itself but shares a sense of a fate-making self with another self, and in turn this other of the self

is now also in the presence of the reader, not some unknowable other but the other who is in the midst of your proliferation of fates.

Of course in order for this not to be a kind of intrusion, and also in order for this not to remain a situation of strategy or managed risk, in other words, in order for it really to be a proliferation of fates that opens up through and to vulnerability, through and to the capacity to be affected by others, people and things, to be possessed by the many futures already present in others, it is necessary to sense that such an opening, such vulnerability will not lead only to a wound. So long as one feels vulnerability will lead only to a wound, strategy remains the main approach, and vulnerability is immediately converted back into risk, into a calculation about how not to be wounded.

But even here it is important to note that such a sense of vulnerability, as a capacity to be affected and to use these new affects to chart new cartographies as Suely Rolnik puts it, even here it is necessary to say that an opening that leads to a wound could also be productive of these affects. But, it is naturally difficult to want to be wounded. And here is where we can perhaps return to the term self-sabotage. Because here there is the possibility to say, why do such a thing to yourself, a thing that sounds potentially violent?

[VH] Because it's the only way to experience transformation and there is a specific joy to it that it's not concerned with something being good or

bad. When you practice this opening of vulnerability you cannot judge if the situation you're opening to is good or bad, you really don't know because if you knew, you would go for the 'good' one and that's strategy. Instead the unstrategic opening of vulnerability allows us to sense the present differently, to perceive the potential fates in the present, to perform multiple readings. And from this very concrete practice other perception emerges, other thoughts, other realities, other politics and other futures.

[SH] But we are left with the fact that even with all of the emerging potentialities, even with the proliferation of fate work, even with the potential we can sense from the obvious failures of strategy both economically and politically, even with the potential expansion of the fate work of migrancy, precarity, and even the numerous governance and governmentality failures to strategise subjects, evident in riots in Britain for instance, which were anti-strategic riots, many more still do not open up to vulnerability, do not self-sabotage, do not experience this joy coming from a fate work that transforms (even if perhaps more people do than we acknowledge). I think this is because there is one more social relation, one more social capacity we have to talk about here. I think we can say that when an opening to vulnerability becomes evident, this is also because a certain safety was available, a safety in co-determination. I mean a certain kind of accomplice off to the side who provides the support for someone to enter into a set

of readings, to open in this way. We could call this support from the side, from the accomplice, love. But we would have to add quickly that we know it as love only by the way it produces vulnerability in another, not in itself. It may be a friend, lover, even the reader, or some combination of these, or this complicity could be a family, or a collective, some kind of complicity we did not see at the time, though maybe we could sense some kind of invisible accomplice somewhere, some kind of accomplice providing this safety that will allow for another to become unsafe. This is love but in this way love can only be known by what it generates, as what went on 'off to the side,' making this opening to vulnerability possible.

[VH] Yes maybe the riots in Britain can be an example of a kind of fate work: unstrategic action that opens up vulnerabilities and other fates. We could think about the rioting as springing from a situation of vulnerability that exceeded itself. The people that 'rioted' in London made themselves even more vulnerable, to further police violence and ridiculous prison sentences. In the lack of a future, they started to disregard it all together and instead they took care of the present and they opened up new fates. Maybe what was lacking then was the accomplice(s) on the side, the safety you talk about, a way in which this vulnerability could have started to self-organize and proliferate rather than burst and discharge. Although as you say there is always more complicity than we acknowledge.

But also the riots remind us that vulnerability is not necessarily linked to any specific aesthetic of weakness or passivity. To open up to vulnerability could very well mean to stay in a situation and 'resist', and find ways to stay alive and care for each other in the midst of it.

[SH] And this seems to bring us close to Catherine Malabou's term plasticity, which she uses for a brain that gets bent and twisted but at the same time can be very resistant, and I think what we are seeing in the face of strategy, of strategising, and in these riots is the failure of strategy to organise to this resistant vulnerability. But this opacity, this riotous self-organisation through which strategy cannot penetrate and through which logistics cannot pass, this opacity, this density, is a collective plasticity, a social plasticity, not subject to a return to self-determination at the biological level, as in Malabou, but co-determined from the start. We might call this co-determined density, this self-organisation that continuously redirects, disperses, and absorbs attempts by capitalist strategy to pass through it, to join it to its logistics of surplus value, we might call this militant preservation. And this for me also brings us back to the realm of politics, not just the failed politics of government, but also Left politics, movement politics.

[VH] Yes. How can we think of politics as a kind of common space or just as an available space

where vulnerabilities can be opened, where large scale fate work can take place? A large-scale collective fate work that makes possible the recognition and the deepening of complicities, a kind of love as a political practice.

[SH] Perhaps, but in many instances as we've said, Left politics seems as caught up in strategy, and in the management of risk, as any politics. Still there may be ways for something like strategy and risk in Left politics to give way to practices that can offer openings to many fates, openings to collective vulnerabilities let's say. So we might think about occupations, of universities, of squares, of squats, or of protests in detention centres, prisons and military bases. These occupations are not always strategic, some arise as with these riots quite specifically from the failure of strategy to strategize people, which is also an opening. But many are strategic, and they are specific about the risk, calculating about the outcome, even if they may include the utopian impulse of 'who knows what might happen' in the future of this occupation. But let's also remember why these occupations occur. It is because an intolerable settlement has been imposed, a settlement that proliferates strategy, and risk management. Obviously to oppose this with a specific risk of occupying a square, or a specific strategy of marching to a building, can leave us far from the kinds of vulnerabilities that first brought on the settlement. These vulnerabilities remain in what we might call the pre-occupation, but

they are now submerged not only by the settlement, settled, dispersed, subject to fortifications, but also now potentially lost to an occupation that is drawn into strategy and risk, the same weapons of the settlement.

[VH] So the occupation ends up becoming a new settlement since it employs the same tools of strategy and risk management. Then fate work in this case would be a practice that dismantles the settlement (and the eventual occupation) by making the pre-occupation emerge and proliferate. An occupation, as the settlement before that, emerges from a set of pre-occupations, vulnerabilities, what are often understood as problems (precarity, debt, etc.) but the real problem is that we try to solve these problems, and whatever solution becomes a new settlement. Wouldn't it instead be possible to open up the problems, the vulnerabilities, understanding what kind of social relations they produce, what kind of affects and possessions they afford, reading their potential in the present? Such a fate work could look at how precarity dismantles the idea of future, of working for a future, and opens up a new present where people take care of how to live now and not when they'll have a car or a house or a family or a cat. How would we organize ourselves if the future would not be of our concern? This has practical consequences and practices have to be invented to deal with these new spaces that are opened. A similar thing can be done with debt as with any other current 'problem'.

[SH] Yes we would have to try to take the strategy out of the discussion of debt. Right now it seems that we are supposed to unite around debt, either to share in the agony of its exploitation, or to beg for forgiveness. This imagination of a future without debt or this coming together around the risk of debt is clearly not going to yield any transformations in being, in ways of living. It asks us to share a common fate in the future either as the exploited who will make a revolution or as the liberated who will live in a new utopia. We move from the commonality of our exploitation to the commonality of our liberation, with no proliferation of self-organisation, of fates, of complicities. Debt holds no surprises here and no potential. But I would like to imagine, and by this I mean practice, or better still join the ongoing practices, of seeing debt, and particularly bad debt as a chance not to bring us together but to proliferate our differences, not in the future, but here, right now. Because to feel a bad debt is to feel a debt that is both incalculable and unpayable and one that refuses credit, refuses to be paid back. Who for instance can pay back, would want to pay back, could count, the debt owed to that accomplice who provided the safety, the love? Not only because such an accomplice would not want it back but because the opening it allowed generated all kinds of fates in the present, all kinds of new sensations brought on by the vulnerability to others. How to count that? Why count that? Instead let's say that bad debt, as capital would wrongly name it, means we all owe something dif-

ferent, and we are not drawn together in a unity by this but rather drawn by the complicity of such debt to any number of new accomplices, to any number of new conspiracies without a plot. Bad debt is a principle of association beyond the self-determined self or the determined future. It is the accumulation of fate work in the present, a present wealth, a wealth of being in the present together.

[VH] I agree. I know that all this talking about proliferation of love and vulnerability can easily look fluffy, but we need to see this against the background of a prevailing narrative of scarcity that's all around. You take a debt because you lack something and then you have to repay it and with interest, just to make sure that you'll keep lacking something. This is clearly not a politics of enabling or of complicity. It's a politics of scarcity that makes sure that you will always lack something.

[SH] That's right but we could go even further, or rather we could come even closer. It is possible to see both the self-help literatures, and the history of so-called self-criticism on the Left, as the politics of scarcity at the level of subjectivity. Because both are strategic tools to make something better in the future, they both understand current forms of being as inadequate, rather than over abundant. Or if they do see over abundance, they want to discipline it, strategise it into specific futures. With self-help and self-criticism we also get the return of work fate, today

especially. Think of the role self-help plays today in the reproduction of precarity, and self-criticism in the taming of the politics of precarity. The answer to precarity is not 'more', more work or more security or more rights. Precarity is super abundance, and the answer is less strategy, less self-help, less self-criticism, those practices that reduce super abundance.

[VH] That's why self-sabotage! It's different from self-criticism. You don't have to criticize yourself and therefore make (become or operate as) a new settlement, now improved. You can read the present, both the tension within your co-determined self, and the tension with what is around and is your accomplice. It is a way to assume that you already live in abundance, that you are capable of proliferating through interrupting mechanisms and dismantling settlements, so you don't have to waste too much time thinking about yourself or carefully controlling how your subjectivity is produced or improved, but rather you can fully act and engage in co-determination. You can just bet towards dismantling or unsettling some of the mechanisms you (or your accomplices) are able to read. It's the kind of thing you can try when you're at the corner, when strategy fails, when future has lost authority, when to wish for the apocalypse it's to think positive, a moment like now for example!

[SH] In contrast to self-help and self-criticism, to their scarcities leading always to a need for strategy

to win some of these scarce resources or a risk management not to lose them or even 'decision science' to attack over abundance — and always to a future that will have to deliver what is not yet here enough — fate work, self-sabotage can then really come to feel not violent, but as you say, fluffy. Because we are suddenly in the presence, in the midst of so many readings, so much love, so many fates, so many openings, so many sensations that of course it can make us drunk, make us fluffy. And in a way this abundance ought to exhaust us only in the ways that exceed us, that is only in the ways Gilles Deleuze understood as an exhaustion that finally makes possible new capacities in the face of abundance, abundant capacities, abundant fates. It seems to me also that because as beings we are affected in more ways than we can count, name, or identify, but we are also subject to an historical process especially the dominant one emanating from Europe, an historical process encouraging us to be in control of ourselves, that we have a tendency to 'feel' things working on us must be coming from another world, because we are supposed to be able to master 'this world.' There are various ways to close down this feeling of an unseen world working on us, of not being self-determined. To close it down or control the unseen world, as Denise Ferreira da Silva has shown us in her discussion of the persecution of affectable beings as a necessary condition of taming the transindividuality of rationality in Europe, of returning reason to the self-determined, male, white, propertied subject, or trying to. And of course religion was the

classic way to acknowledge this other world and close it down, and reason might be said to be really another reaction to this other world, even if it claimed to be a reaction to this closing down. Thus anyone who seems to open up to this transbeing, to this affect, becomes the enemy, the virus to these reasonable ones, the ones who make policy, who believe in dialogue, who are the settlers. But now once we open up to this being affected, as some have always done, but with what we are suggesting, with fate work, with a surplus of readings and readers, this other world, the unseen world, becomes even more abundantly present. Once we start 'seeing things' I think something happens to this other world, and to us.

[VH] Yes because this unseen world, this world of everything that affects us, from this glass of water to the smile of a passer-by to the position of the planets, everything operates in the present. In a way it's nothing esoteric, this unseen world is very concrete, just we cannot see it. I guess that's why strategy keeps failing. It cannot bring this unknown world into its equation, but still it's pretty dumb just to ignore its existence all together and keep failing. There are ways to deal with what we don't see that can be generative and not religious or repressive. Like what we're trying to do here bringing fate into the notion of work.

[SH] So instead of trying to control this other world through readings of fate, as has often been 'understood' as the tradition among oracles, sooth-

sayers, witches, instead we see a counter-practice. We see that far from taming or lining up two worlds, such readers often destabilize, proliferate fates, bring another world into intense resonance with this one. Because really when you have your fortune told, it is in a way no help. It proves something is working on you, something you cannot control. You can only be open or not open to it. The more open you are to it, the more that the other world interrupts, disrupting that reading, requiring another. It does not matter perhaps if this other world is really other, since the other is other to the self too, co-determined, to whatever one would understand as this world now. This other world then is not a matter of religion or superstition. It is a matter of openness to affect, but also of what Suely Rolnik calls 'ruthlessness.' A harsh word but one she uses I think against any mode of thinking or being that attempts to stabilize worlds, or especially to make them one. And perhaps one way we have to be ruthless is by generalising reading, not allowing readers to control reading.

[VH] That's what I'm interested in with practices like political therapy and fake therapy. Anyone can give therapy to anyone else, just you have to put yourself to do it for real and be open to it. If you come to have or do a fake therapy session it means you're open to find out what it is to 'cure' or 'be cured'. You practice engaging in a present with no future guarantees or specific aim but still with a full commitment, a clear intention. Here the reader, the fake therapist

has no authority, she is not backed up by a discipline or a fixed body of knowledge. That's maybe part of the needed anti-psychiatric move you were talking about before, the move that would allow us to invest ourselves in impossible tasks (like to cure, or radical political change) with no expertise needed, to find out what it really means or can mean, without knowing it in advance.

[SH] Maybe we could say more by returning to the rioters in London. The riots felt to me, as I walked among them because this was possible, such was their character, like an eruption of fates or readings, unsustainable, but pointing to an excess of the future in the present. Riots are a self-organisation of overflowing fates, fates produced by all the social life that gets degraded, policed, ignored or exploited most of the time but at the same time is not so ignored that it does not call forth these responses, the terroristic resistance of the state. So when those kids said they ran the city, they meant it. They organised the city even if dangerously, briefly and through their own vulnerability. But that is the point. We saw this tremendous social vulnerability, open to so much in a way that had not perhaps found its co-determinations allowing for such self-organisation to find more and more fates for all. But nonetheless we saw people allowing themselves to be possessed by the riots, taken up in a thousand readings of their fates by others.

Riots and occupations in this sense share a lot in common. Both erupt, unsettle a settlement from

within, around, outside and inside that settlement, from its preoccupation, from its 'surround' as Fred Moten and I have called it. At first we might say that the occupation and the riot are both fate work riding an overproduction of social capacities but that occupations are fate work where the co-determination is in place and everyone has a chance to use this common of fate reading to make fates. We might oppose this to riots where the co-determination, including the accomplices that make vulnerabilities possible, are unstable, unmatched, in turbulence. But not so fast. Although we can certainly feel this potentiality in occupations, we can often also see the emergence of risk management, of a class of readers and a class of those being read, and more than anything else a new productivism that says we must work at this, we must set up that, we must keep discussing this thing, we must keep critiquing that thing. This productivism is nothing but a mirror of either work fate or its shadowy illusion, a better future. Riots at least show their exhaustion up front. They have a wild productivism of their own in the way they organise a city so quickly. It is clear this cannot go on, even as it goes on. The vulnerabilities are unable to open onto the fates in this furious present. They are met with violence and become violent. Riots help us to see another world but also to resist trying to control it, resist the work fate of lining up these worlds. They introduce the question of militant preservation. A militant preservation I would understand as the resistance of the collectivized object. If strategy fails to make of these rioters

the kind of logistical subjects who are compelled to connect everything to everything else, then there self-organisation as objects through which strategy will not pass is a kind of militant preservation, a plan to stay as they are, vulnerable as they are.

[VH] And the question of organization within vulnerability. It implies thinking about vulnerability as a capacity for the construction of fates, rather than a state or some sort of 'condition' usually associated with a weakness. To be vulnerable instead means to be open to the organization of a present that disregards the future. Now when we have to organize something, take work for example, we have to think how to do this in order to either be the most productive, or interesting, or to meet a certain deadline. There is always an obsession about the future. To organize something in disregard of the future is to say: how could we possibly do this inhabiting the present conditions, needs and desires rather than being obsessed by the future outcome? In such a way that opens up possibilities instead of being a way to reduce the possibilities and chose one strategy over another. The lack of consideration for the future may sound very scary and pointing directly to chaos, but that's only when you consider the actors of such organization as self-determined subjects. The only way we can really shift the attention from future to present, is through establishing a relationship of complicity with the others (animate and inanimate ones) all around us and in us. Simply because we cannot disregard the future on our own. It's a paradigm

shift but one that is very concrete and not future-oriented. It's not difficult to start imagining what could be ways of avoiding future-oriented managing of our lives, work, political struggle and so on. Already when you take the time to do so, you start to engage in fate work. You become busy building present situations so even when you might be attacked or attack, you don't have to defend your original project, you'll just continue building presents now taking in consideration the situation of conflict. I'm just thinking that future is unavoidable, in the sense that it will come anyway, you want it or not. So instead of staying trapped in the expectations and subjectivities that the current notion of future creates in capitalist society, we can try another move for social change.

[SH] What strategy does in one sense, is take up time and space, take it up in the name of the future, leaving nothing for us here and now, or at least this is its never-fully-realised ambition. Work fate is a fate of no free time and no free space, And of course finance produces this no free time and no free space as our permanent mood, the affect of today. There is no time or space not open to its strategies of risk and securitisation. It wants the future to look like the present and will attempt to control all present time and present space to ensure this, control the time through work and the space through settlement. This suggests to me that the concrete way to do fate work, to proliferate readings is to make the free time and free space, but at the same time, fate

work itself makes free time and free space, precisely by freeing us from strategy and its future. Collective self-defense of this free space and free time against settlement, against strategy, against work fate, is not a defense therefore of fate work. You are right it needs no defending because it does not try to hold any territory. It's fugitive even when it stays. Rather collective self-defense is of the free time and free space to make fate work, and as fate work grows and produces free time and free space, so too should the need for self-defense diminishes.

[VH] Yes, but free time and free spaces cannot be defended directly. For instance, if you think that sitting in silence means creating free time and you start to defend this practice as one that has to exist and be done collectively then you end up with work fate again. You know what's good, what's 'free' time and space and then you work to make it happen. This is very tricky. Fate work needs time and space in order to happen. It needs those gaps between making decisions, between identifying what can be done, between doubting and changing. In a way it is about letting those spaces and times open up. But you can't make an ideology of the gaps, of the in-betweens, of the 'free' space and time, you can't strive to produce them as if they were 'just what we needed'. You can be sensitive to them and try to inhabit them instead of wanting to produce them. You can try to break whatever mechanism you recognize that is closing them down or not letting them happen. I guess it also has

to do with understanding yourself as a kind of co-determining agent rather than a self-determined subject, so you can engage your abundant being in these processes and act against any kind of settlement you are able to recognize and sabotage them.

[SH] Yes only practice will tell! No free or unfree time or space but practice makes it so. And this brings us back to the concrete practices. Of course it cannot be just tarot cards or palm readings that can be the materials of fate work, so too can any materials that make a certain free space and free time that release us from strategy long enough to start experimenting with other fates, and with enough room to bring those fates right into the present, right now. Here is what might at first seem an unusual example from the US, but also from Africa and Latin America, even from Singapore. Bible study groups. Okay this kind of study is often degraded and not only, or perhaps we could even say not mainly, because it retains a notion of centralised authority and singular fates, both of which are a problem. But this is no reason to neglect this social form of reading, of studying, of making fates, any more than we would reject tarot cards for the way they are used to capture fates sometimes rather than release more. Bible study is largely neglected as a form of self-organisation of fate work because it is conducted in the US by black people or poor white people, and in Africa and Latin America by poor people often on the margins of more powerful Christian institutions. But it is a mass popu-

lar form bringing together fate work, reading, and study. It needs its own liberation of course, its own liberation theology just as in the Catholic base communities, (and often too it has been set against such communities, and certainly against the hierarchical power of the Catholic church.) But such bible study demonstrates the social capacity to share readings, to study without end, without credit, in debt to each other. Or indeed as we have reached this point we could say without too much trouble that every form of self-organisation present today is by definition also a practice of fate work, of making fates through the unfolding of organisation, or changing and accumulating fates with every unfolding, every new combination, intensity, extension of these common organisations, every new common rhythm of speed and slowness. Every instance of self- organisation from children's games, to gaming communities, to parties and carnivals, to new kinds of families, though none of these are without the struggles accompanying self-organisation in a society that is subject to constant if unsuccessful enclosures, all these instances and more make fate work happen. Fate work it turns out, is everywhere.

[VH] Indeed! The problem is that every form of organization or activity is now measured and valued in relation to its 'success', its functionality, its capacity to produce measurable results, in other words through its single fate. So it's no surprise that all the already existing instances of fate work are usu-

ally overlooked and not so much taken into serious consideration. The legend that self- organization doesn't work, that all the attempts of re-organizing communal living in the 60s and 70s have failed is built on this system of valorization of the single fate. A system of valorization that doesn't want to see (and let exist) the multiple fates, not even the frictions, the time and spaces that such experiences opened, the intensities they produced detached from any notion of success. Fate work disregards the future and with it any system of valorization that is attached to determining the future. Instead with every new fate it makes possible, fake work produces a new valorisation of the present. In fate work, it is not the future but our present that is full of wealth.

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LIGHTWORKERS:
MYTHS ARE ALTERNATIONS,
THEY ARE RECORDS OF MUTATIONS
IOANNA GERAKIDI

We were laying on the couch, talking about the poems of Sonia Sanchez, I made him read my favourites aloud, I was falling for his rhythms, the ways his voice could flawlessly follow what will not be uttered. He then started writing his own haikus on my phone's notes, the last one goes:

*Numbers and letters
Die two deaths of lust and curse
Behind, living the world*

He read it aloud, and while he was doing so, I could only synesthetically understand where each element of his composition was leading towards. Through his words, the present moment was deconstructed, and along with it all of my systemic pasts and futures. I thought of his haiku as a myth, when myths are perceived as efforts to engage loss and failure and gaps and wounds; when myths are vessels for speaking about socio-political, personal and collective, possible and impossible poetics and poethics. Myths, give rise to longing, to the desire and need to analyse and potentially unfold the similarities and distinctions across different cultural phenomena, stories and histories. Myths are metaphors; they are movements towards reaching the unknown, touching otherness, espousing ambiguities.

I have begun researching on the myth as a method for exploring longing, listening for and eventually un-demonising the unintelligible by looking at its etymology. Myth, a word coming from the Greek verb, *myo*, meaning to introduce or induct someone to something, does not linguistically imply the fictionalised form. Myth is neither a fairytale nor a story based on facts never experienced. It is the speech and what exists in parallel with it; it is the advice; it is an invitation to another kind of knowledge, a possibility to feel and stroke what has yet not been documented; what has been erased, eroded, dismissed.

And operating as invitation that explores and stays with the unknown or the one that hasn't yet been transcribed, myth becomes a promise of joining the silenced, through grasping an elsewhere. Myths do not impose any singular truth or meaning, but instead allow a fluidity in apprehension; they become a form where responsibility is shared between the storyteller and the listener, the writer and the reader. They rearrange hierarchies, disrupt the matrix of cultural representations and along with them the indexes of power. Myths are parables; structures dealing with attention and authority as exchangeable, dynamic and fluid conducts. Therefore, can we schematically think of myths as a means for speaking about the radically queer? This paper is using the stories of Hecate and Medusa, disobedient figures of the ancient greek mythology, fragments of Sappho's and Sonia Sanchez's poetry, Kathy Acker's paper *Against Ordinary Language*, Tina Camp's thesis on hap-

ticity and Alina Popa's diary as its temporal axes. In between them, constellations of a lover's words and my responses to them are utilized in order to re-orientate the narrative.

Myths, as fragments of representations of the past, current words and future hopes, let us think through an a-systemic and non-normative way of being in the world. They are compositions of unrequited feelings, fictions and frictions, memories and fantasies, beginnings and ends. They are uncompromisingly irrational and non-linear in their time and space; they are chaotic. They only exist through intellectual and verbal leaps, lisps, whispers and screams. Myths break the syntaxes of thought and language; they are erotic, dramatic, frightening and soothing at the same time. They absorb and release semantic burden, generate new imaginaries and other meetings. Their oppositional structure is a doorway to a transmeeting with endless possibilities.

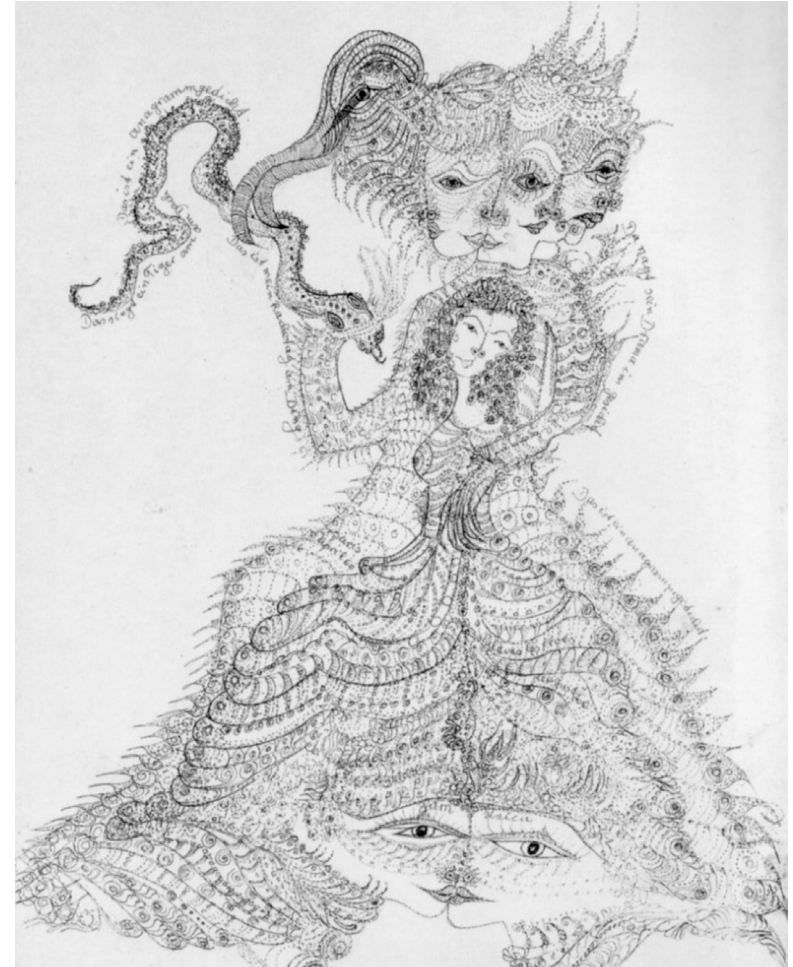
Hecate, the goddess of magic, witchcraft, the night, moon, ghosts and necromancy in Greek Mythology, somatisises these polymorphous, transpatial politics that myths can grasp. Her story traces what it means to get lost and to never be found. Often shown in drawings holding a pair of torches or a key, Hecate becomes a parable of entering this parallel reality, this resilient dreaming of being in a safe space, where Otherness is treated tenderly. In sculptures, Hecate, is depicted in triple form with her three heads and three bodies touching each other creating a circular scheme.

How to calculate the one that always circulates?
How staying with the unmeasurable can legitimise
the instantiation of a state of becoming with the
Other?

According to the Homeric Hymn to Demeter and to Hesiod's Theogony, Hecate was the daughter of the Titanes Perses and Asteria. It was through them that she earned a power over heaven, earth, and sea. Hecate assisted Demeter in her search for Persephone, guiding her through the night with flaming torches. After the mother-daughter reunion, she became Persephone's minister and companion in Hades. Her allies were the Furies, the winged creatures who punished wrongdoing, and her children were the Empusae, female demons partial to seducing travellers. Euripides in *Medea* speaks about Hecate as the protector of the witches; therefore she is closely affiliated with the Mysteries of Eleusis. The myth associates her also with the moon. Selene, Artemis and her, were all regarded as lunar goddesses.

Hecate is a figure intrinsically ambivalent; she straddles conventional boundaries and eludes definition. And how could it be otherwise, when her presence in greek mythology represents the irrational, the one that escapes meaning, the one that finds itself in between life and death, that gives voice to what is abolished from the civic context. Hecate symbolises myth itself, she has access both to the good and to the evil, to heaven and hell, protection and seduction. Her actions, products of a self in transmutation, have a fluctuating quality; they construct a conversational format, 'a mode of belonging'¹, paraphrasing the words of the decolonial theorist bell

1. hooks, b and powell a. j. (2015) *Belonging through connection*. [online] Available at: www.youtube.com/watch?v=0sX7fqlU4gQ. [Accessed at 19 Apr. 2019]



Hecate by Unica Zürn

hooks. They are going against the mystification of the virtuous or the depreciation of the vicious. They do so, by re-considering what is catholically perceived as logical, moral and ethic. Hecate's allegory, erases dichotomies; it's both eutopic and dystopic, an intercessor and a participant in the cosmic alterity.

Myths are stories about alternations, they are records of mutations. They stay with oxymora, hidden or subverted meanings, dilemmas and perversions of reality. The performance and queer scholar José Esteban Muñoz writes that: “Queerness is a structuring and educated mode of desiring that allows us to see and feel beyond the quagmire of the present. The here and now is a prison house. We must strive, in the phase of here and now’s totalising rendering of reality to think and feel a then and there.”² Myths embody Muñoz’s words, they metamorphose the here and now. They enact, through their imaginary form, a listening, or better phrased a practice of auscultation, on what will perhaps always be linguistically or linearly puzzled. They are sites of resistance.

Medusa’s myth accordingly can be felt or interpreted as a story commenting on the oppressive, yet untold dynamics of power. As one of the most popular creatures of Greek Mythology, Medusa symbolises an imposition of discomfort. The once beautiful maiden with golden hair and priestess of Athena (goddess of wisdom), vowed to abstain from any erotic or sexual activity for her entire life, until she fell in love with Poseidon, the god of sea and other waters. She, willfully going against her vow, married him. For this, Athena punished her hideously. She turned Medusa into an ugly being, by making her eyes bloodshot and raging, her face monstrous. The once lovely hair was morphed into poisonous, dangerous snakes. Her

white skin turned into a scary green shade. From then on she roamed, shamed, shunned and loathed by everyone. Thence, by Athena’s curse, anyone she looked upon turned to stone.

What kind of tensions does the myth of Medusa discharge with regard to socio-political oppressions, female, feminine or feminised qualities, beauty standards and ethics, racial and colonial issues? What are the affiliations of the priorly mentioned subjects to patriarchy, privilege, the mystified realms of health and logic, but also to otherness, fears, and more complex infantile agonies? Thinking across Medusa’s myth and whilst trying to avoid any anachronistic analyses of its politics, it is a story where memory and factual reality, where truths and fictions intersect. Medusa, becomes an emblem of the disobedient other, where untold traumas, secret yearnings, abnegated lusts and freedoms are being projected on, for a temporal catharsis of the collective ‘sins’.

It is only through its chasms and irrationality that we understand the myth of Medusa. Writer and poet Rebecca Tamás asserts that, “what we learn from the occult is not the answer to questions, but ways to ask new questions.”³ Myths provide the ground for another kind of knowledge; one that fills in the gaping torments, one that goes against the accelerationist demand of finding immediate solutions. Myths suggest that thinking across, looking at and staying with the unintelligible or the nonsensical is the very possibility of this other knowledge.

2. Muñoz, J. E. (2019) *Cruising Utopia: The then and there of queer futurity*. New York: New York University Press, p. 1

3. Tamás, R. (2019). The songs of Hecate: Poetry and the language of the occult. *The White Review* [online] Issue No. 24. Available at: www.thewhiterreview.org/feature/songs-hecate-poetry-language-occult/. [Accessed at 19 Apr. 2019]



The Blue Cat by Pamela Colman Smith

] to give
] yet of the glorious
] of the beautiful and good, you
] of pain [me

] blame
] swollen
] you take your fill. For [my thinking
] not thus
] is arranged
] nor

all night long] I am aware

] of evildoing
]
] other
] minds
] blessed ones
]
]

Poetry, astrology, fake therapy, tarot and other readings have the same affect in the formation of another knowledge. They generate a (para)linguistic system based on monodies, neologisms, amphisemies. Their conceptual and architectural morph allows a horizontality in comprehension. "Projecting an absolute ignorance onto others, a characteristic of oppression, negates education and knowledge as processes of inquiry,"⁴ writes Paulo Freire in the *Pedagogy of the Oppressed*. Poetry—as any kind of poetic scheme—reverses this exact established system of knowledge. In Anne Carson's translation of the already fragmented poetry of the ancient greek poet Sappho, the vocal breaks of hesitation, the breaths of lust are transcribed, rejecting at times verbal language. Who's giving, who's in pain, who's to be blamed, and who's swollen? What's beautiful, what's glorious and good, whose minds are the blessed ones? In Sappho's poetry the syntactic rules imposing a clearly stated subject and/or a fixated direct or indirect object affected by the verb, are missing. Sappho and her object of desire become one, their limits as autonomous entities are blurred. Correspondingly, the adjectives fail their function; there are no nouns to be described. In Sappho's poetry, words, countings, inhalations and exhalations, introduce us—as readers—to a knowledge based on the somatic experience, based on a sonic ekphrasis rather than on a spinal array of thoughts.

4. Freire, P. (2005). *Pedagogy of the oppressed*. New York: The Continuum Publishing Group, p. 8

Being given the permission to read a poem written with a body and soul in crisis—in Sappho's case such a crisis arises from being in the fragile state of eros—shifts the centre of power; "it offers a possibility of [both] mutual [growth] and self-growth, reflection, community, it puts down the mask of authority," borrowing the words of the artist and educator Rajkamal Kahlon.⁵

Can poetry, fictional narratives and fractured utterances be regarded as morphemes of myths? Or could they at least be thought of as constructions, drips or fumes carrying similar qualities? In her haiku for Sarah Vaughan, Sonia Sanchez writes:

*without your
residential breath
I lose my timing.*

Her poem succeeds in dismantling the current and along with it what comes before and after it. Her words and what exists, or does not exist, in between them impose a recounting of rhythms and their affiliation to the multiple times surrounding us. The meanings arising from the positionality, selection and composition of letters, spaces and lines, alternate according to the tonality of the voice; uttering them with a soft, low-pitched voice becomes an act of tenderness, whereas touching them with a sentimental vocal excess turns into a gesture of expressing the

5. Kahlon, R. *You said it wouldn't hurt: Embodied Pedagogy*. p. 4 (This text was passed to me through a friend which acquired it directly from the artist and I haven't been able to identify whether it has been published elsewhere.)

unflattened violence that the separation from any kind of beloved object implies. The you has deliberately invaded the I, and never left. Their intersection formed an idiolectic, a-canonial and timeless structure. Sonia Sanchez's haiku is reminiscent of an ambient poetics, when the word ambient is textually approached through its definition as a going around; an amplification of a surrounding, encircling motion. Through suggesting an alternative chronicle, one that can only be tried, experienced, felt and measured by the two entities occupying it, the poet suggests another imaginary; and in this elsewhere, the domineering social constructions shift unreservedly, the unknown is no longer prohibited.

I've texted him 12 hours ago, I told him that I miss his smile and shoulders and palms, and that I could write one thousand words instead of eight, but I had to make a selection, as texting is about learning how to make the less painful linguistic decisions, sometimes even the most distant ones, he hasn't yet replied, but I do know his time is different than mine and than many others' time, I read his poems again,

*In the external
Present, we sit dull
To our own demise*

*instead of goodbye
he said do not forget me, he re-introduced me to
unconditional love
a fearless applause
of affection*

Tina Campt writes that: "Hapticity is not empathy. It is not 'feeling for' another. It is labor. It is the work of feeling precarious or feeling precarity in relation to differentially valued and devalued bodies and using that feeling as the basis of a connection in the absence of any guarantee of respite, respect, affection or acknowledgement. It is a gamble that may very well end in failure that is worth taking the risk nonetheless. It is the gamble to allow oneself to be touched or moved independent of physical contact."⁶

I should leave her words linger among mine and his and others'; let them exist as a parenthesis, transitional or compositional thesis, making a sense or a non-sense on their own, without contextualisations, theorisations, impositions of elucidations. I should let you as reader, listener of others, or of your own voice to stay with their resonances and reverberations of what has been said been, of what follows after.

6. Campt, T. 9 (2018). Sitting on a Man's Head. *ASAP Journal* [online] b.O.s. 5.4. Available at: www.asapjournal.com/b-o-s-5-4-slow-walking-tina-campt/. [Accessed at 19 Apr. 2019]

Kathy Acker in her essay *Against Ordinary Language*, in which she uses bodybuilding as a metaphor for inventing new languages, writes: "I want to break the muscle so that it can grow back larger, but I do not want to destroy the muscle so that growth is prevented. In order to avoid injury, I first warm up the muscular group, then carefully bring it up to failure. I do this by working the muscular group through a calculated number of sets during a calculated time span. If I tried immediately to bring a muscle group up to failure by lifting the heaviest weight I could handle, I might injure myself. I want to shock my body into growth; I do not want to hurt it. Therefore, in bodybuilding, failure is always connected to counting. I calculate which weight to use; I then count off how many times I lift that weight and the seconds between each lift. This is how I control the intensity of my workout."⁷

Kathy Acker induces us to her language, uttered primarily with and by her body. Through it she is able to think about the world sensorially; to stay with an expressive modality that is being utilised beyond the limits of the normative language. Her alternative vocabulary undoes the hapticity of words, even if it is being given back to us through them in order to grasp it. In Acker's bodybuilding temporality, another world is revealed. This world, accepts failure not only as a politics but as a methodology of spiritual growth; it reinvents times, breaks,

7. Acker, K. (1992). *Against ordinary language, the language of the body*. [online] p. 23. Available at: www.yvonnebuchheim.com/uploads/1/7/0/8/17088324/acker-kathy_the_language_of_the_body.pdf. [Accessed at 19 Apr. 2019]

weights. Her thoughts metaphorically examine the right to 'eat one's self', the will to transform, to twist, to shrink, to expand. Her words, activate the power to metamorphose. Her auto-ethnographic introduction/induction to a somatic language embeds the characteristics of the myth. It thinks across otherness, challenges the rules of normativity; it gives rise to longing for another future.

The myth, a door to this parallel reality we don't often acknowledge, to this other sense we don't often feel, to this other language we don't often speak, is "a sign of the intelligence of the soul" in the words of Alina Popa, an artist who recently passed away due to an incurable disease. In one of her diaries, Popa writes that "healing is a poem written with the language of symptoms." The language of symptoms was for her a bodily language arising from her inability to move. Embracing the strangeness of being with an (until recently) unfamiliar body, she found another soul, another reality. She utilised her bodily symptoms to reinvent her being; she drew with her eyes closed, in a notebook in her chest, depicting parts of her body or the words coming out of it. She writes:

The body is real but what we think about it is fiction. Medical views are the fiction imposed on us by modernity and capitalism. This is a consensus fiction. How you regard the body, how you name, determines how you act upon it and also how it acts back. We are free, and the body actually calls for

*individual fictions, or for fictions that give it trust and freedom. Perspective creates reality. To change the standard perspective is almost impossible. It cannot be done mentally, it needs different practices—to practice ways to interact with the world that give back multiplicity to reality. We actually don't truly interact with the world anymore. That is because we know too well the practices that are possible, and so they will give back the same outcomes. The body is as alien as the world. And we have to embrace its strangeness. Especially when we need reality to be crazy, when we are ill with no chance at survival from the standard perspective. I don't want my reality normal. I need it off the book.*⁸

This parallel reality that Popa speaks about is to me the one that myths bring us closer to. Myth becomes a methodology for creating imaginary nexuses, and for occupying them after with all of our senses. One could say, but what about pain? The pain implied in our need to touch an other commons and stick with it against all odds. By no means, my intention is to exoticise that pain; to make it sound comforting or glorious. What I'm suggesting instead through the aforementioned paradigms, is that we stay together in this pain, that we utilise myths as a means to construct new realities. Angela Davis says that "we need to think and act as if we were living 200 years

8. Flueraş, F. (2019). Alina Popa: Disease as an aesthetic project. *e-flux conversations* [online] Available at: www.conversations.e-flux.com/t/alina-popa-disease-as-an-aesthetic-project/8850 [Accessed 19 Apr. 2019].

ahead of our times.”⁹ Let’s become with myths, with the schemes inducting us (as human beings) to the unknown, let’s find the awkwardness and otherness in our bodies and souls, fall for them, stroke them gently.



Untitled #50, Disasters and Fairy Tales by Cindy Sherman

Ioanna Gerakidi is an independent writer, curator and educator based both in Amsterdam and Athens. Her research subjects rotate around philosophies of language and paralanguage, feminist, queer and anti-colonial studies and theories of mental and physical disorder. Her words, when presented as performative gestures, draw on auto-ethnographic structures, bio-fictional narratives and fragile eroto-historiographies to speak about instantiations of the impossible.

9. Davis, A. (2017). Abolition Feminism: Theories & Practices. [lecture] Nicos Poulantzas Institute, Athens.



1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to develop a plan of action. This involves setting goals and determining the steps that need to be taken to achieve those goals.

3. The third step is to implement the plan. This involves putting the plan into action and monitoring progress to ensure that the goals are being met.

4. The final step is to evaluate the results. This involves assessing the outcomes of the process and determining whether the goals have been achieved.

5. The process is then repeated as needed to address any remaining issues or to improve the results.

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